

TA-F222ESR/F530ES

SERVICE MANUAL

Canadian Model
AEP Model
UK Model

TA-F530ES

E Model
TA-F222ESR



photo : TA-F530ES

SPECIFICATIONS

Amplifier section

Item	Condition		Data
Continuous RMS power outut (both channels driven simultaneously)	4 ohms, 20 Hz-20 kHz THD 0.008%	Canadian, UK, E model	120 W + 120 W (THD 0.01%) (DIN: 160 W + 160 W)
	6 ohms, 20 Hz-20 kHz THD 0.006%	Canadian, UK, E model	100 W + 100 W (DIN: 120 W + 120 W)
		AEP, West Germany model	95 W + 95 W (DIN: 115 W + 115 W)
	8 ohms, 20 Hz-20 kHz THD 0.004%	Canadian, UK, E model	90 W + 90 W (DIN: 110 W + 110 W)
		AEP, West Germany model	80 W + 80 W (DIN: 100 W + 100 W)
Power band width (IHF)	8 ohms, THD 0,02%		10 Hz - 100 kHz at 45 W
Dynamic headroom ("78 IHF)	4 ohms		2 dB
	8 ohms		1.2 dB
Total harmonic distortion	8 ohms, at 10 watt output		0.003%
Intermodulation (IM) distortion 60 Hz: 7 kHz = 4:1	4 ohm, at rated output		0.008%
	6 ohms at rated output		0.006%
	8 ohms at rated output		0.004%
Damping factor	8 ohms, 1 kHz		50
Residual noise	network A		less than 90µV
Frequency response	PHONO MM		RIAA equalization curve ±0.2 dB
	TUNER, CD, TAPE 1, 2, 3, DIRECT IN		2 Hz - 200 kHz $\begin{smallmatrix} +0 \\ -3 \end{smallmatrix}$ dB

—Continued on page 2—

INTEGRATED STEREO AMPLIFIER
SONY®



Item	Condition		Data
Input sensitivity	PHONO	MC	0.17 mV, 100 ohms.
		MM	2.5 mV, 50 kohms
	TUNER, CD, DIRECT IN, TAPE 1, 2, 3 ADAPTOR IN		150 mV, 50 kohms
S/N (network)	PHONO	MC	68 dB 76 dB* (A)
		MM	80 dB 87 dB* (A)
	TUNER, CD, DIRECT IN, TAPE 1, 2, 3 ADAPTOR IN		84 dB 105 dB* (A)
Output voltage impedance	REC OUT 1, 2, 3 ADAPTOR OUT		150 mV, 1 kohm
	HEADPHONES		25 miliwatts (at 8 ohms) Accepts low and high impedance headphones.
Tone controls	BASS, at 100 Hz		±6 dB (turnover freq. 400 Hz)
	TREBLE, at 10 kHz		±6 dB (freq. 4 kHz)

General

System Preamplifier section: Low-noise high gain NFB type
 equalizer amplifier, passive type direct tone control
 Power amplifier section: Pure-complementary SEPP
 power amplifier

Power requirements
 AEP, West Germany model : 220 V AC, 50 Hz
 U K model: 240 V AC, 50 Hz
 E model : 120 V, 220 V or 240 V AC
 adjustable, 50/60 Hz
 Canadian model : 120 V AC, 50/60Hz

Power consumption

Canadian model	510 VA
AEP, UK, West Germany model	220 W
UK model	600 W
E model	340 W

AC outlet

Canadian model	2 switched, 1 unswitched, 100 watts max. each
AEP, UK, West Germany model	—
E model	1 switched, 1 unswitched, 100 watts each

Dimensions

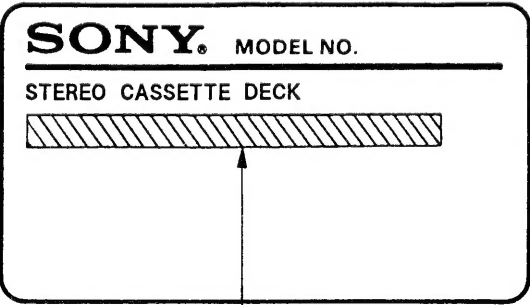
Approx. 430 x 150 x 370 mm (w/h/d)
(17 x 5⁷/₈ x 14⁹/₁₆ inches)

Weight

Approx. 13.5 kg (29 lbs 13 oz) net

MODEL IDENTIFICATION

— Specification Label —



Canadian model : AC 120V 60Hz
AEP, West Germany model : AC 220V~50/60Hz
UK model : AC 240V~50/60Hz
E model : AC 120/220/240V~50/60Hz

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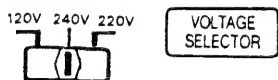
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SERVICING NOTES



On operating voltage

Before operating the unit, check that the operating voltage of your unit is identical with the voltage of your local power supply.


Where purchased	Operating voltage
UK Model	240 V AC
Canadian Model	120V AC
AEP, West Germany Model	220 V AC
E Model	120 V, 220 V or 240 V AC adjustable by AC voltage selector



SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY MARK  OR DOTTED LINE WITH MARK  ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

ATTENTION AU COMPOSANT AYANT RAPPORT À LA SÉCURITÉ!

LES COMPOSANTS IDENTIFIÉS PAR UNE MARQUE  SUR LES DIAGRAMMES SCHÉMATIQUES ET LA LISTE DES PIÈCES SONT CRITIQUES POUR LA SÉCURITÉ DE FONCTIONNEMENT. NE REMPLACER CES COMPOSANTS QUE PAR DES PIÈCES SONY DONT LES NUMÉROS SONT DONNÉS DANS CE MANUEL OU DANS LES SUPPLÉMENTS PUBLIÉS PAR SONY.

SAFETY CHECK-OUT

After correcting the original service problem, perform the following safety check before releasing the set to the customer:

Check the antenna terminals, metal trim, "metallized" knobs, screws, and all other exposed metal parts for AC leakage. Check leakage as described below.

LEAKAGE TEST

The AC leakage from any exposed metal part to earth ground and from all exposed metal parts to any exposed metal part having a return to chassis, must not exceed 0.5 mA (500 microamperes). Leakage current can be measured by any one of three methods.

1. A commercial leakage tester, such as the Simpson 229 or RCA WT-540A. Follow the manufacturers' instructions to use these instruments.
2. A battery-operated AC milliammeter. The Data Precision 245 digital multimeter is suitable for this job.
3. Measuring the voltage drop across a resistor by means of a VOM or battery-operated AC voltmeter. The "limit" indication is 0.75 V, so analog meters must have an accurate low-voltage scale. The Simpson 250 and Sanwa SH-63Trd are examples of a passive VOM that is suitable. Nearly all battery operated digital multimeters that have a 2V AC range are suitable. (See Fig. A)

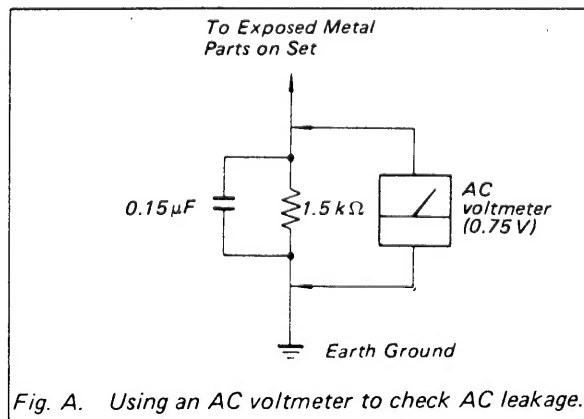
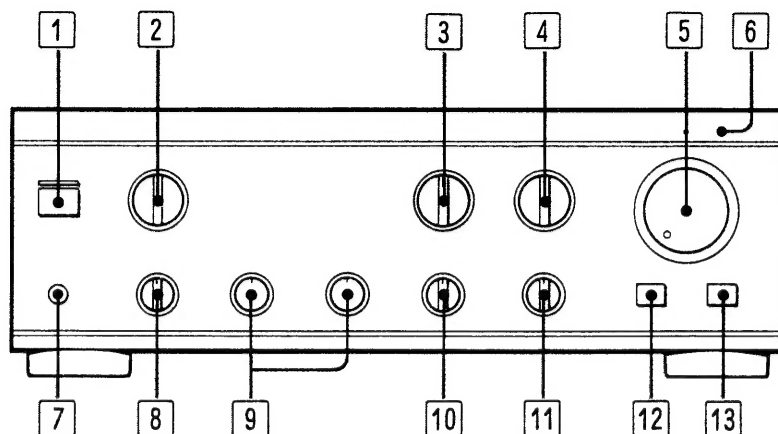


Fig. A. Using an AC voltmeter to check AC leakage.

SECTION 1

GENERAL

PARTS IDENTIFICATION



1 POWER switch and power/standby indicator

Immediately after turning ON the power, the standby indicator lights in red as the built-in muting circuit activates.

When the amplifier stays in a stable operating condition, the indicator lights in green.

The indicator lights in red when the unit detects shorting of circuit of the speaker outputs or in case of short-circuit of the inputs of DC components.

In such a case, disconnect the power source and check the connected components and speaker systems.

2 SPEAKERS selector

Select speaker system A or B, or both.

3 ADAPTOR/DIRECT IN switch

Set to NORMAL to select program source by INPUT SELECTOR. To listen to a program source processed through adaptor (graphic equalizer, for example) connected to ADAPTOR jacks, set the selector to ADAPTOR.

To listen to a program source connected to DIRECT IN jacks, set it to DIRECT IN.

Note that selecting ADAPTOR has no effect upon the signals output through the REC OUT jacks.

4 INPUT SELECTOR

Selects the desired program source.

5 ATTENUATOR knob

Regulates the sound level.

6 MUTING switch and indicator

Generally, keep the switch released (OFF).

Depress the switch to reduce the sound level by 20 dB. (Output voltage becomes 1/10.)

7 HEADPHONES jack (stereo phone jack)

8 MODE selector

STEREO: For listening to a stereo program.

MONO: For listening to a monaural program.

9 BASS and TREBLE controls

10 REC OUT SELECTOR

Selects the program source sent to the REC OUT jacks (rear panel).

11 BALANCE control

Controls the sound level of left and right speakers.

12 SOURCE DIRECT switch and indicator

13 CARTRIDGE selector

Set the selector according to your cartridge.

MM: For moving-magnet type cartridge

MC: For moving-coil type cartridge

SECTION 2

ELECTRICAL ADJUSTMENTS

PRECAUTIONS

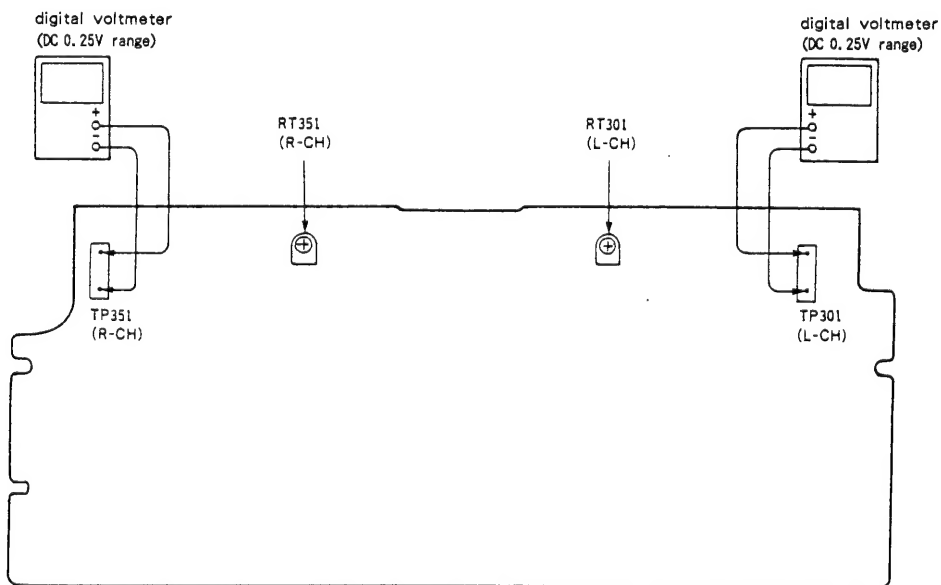
1. Adjust the idling after tuning the unit on for about 10-15 minutes, giving it time to warm up.
2. Always make sure to adjust the idling when repairing the power amp section or when replacing any parts.

【IDLING ADJUSTMENT】

Procedure :

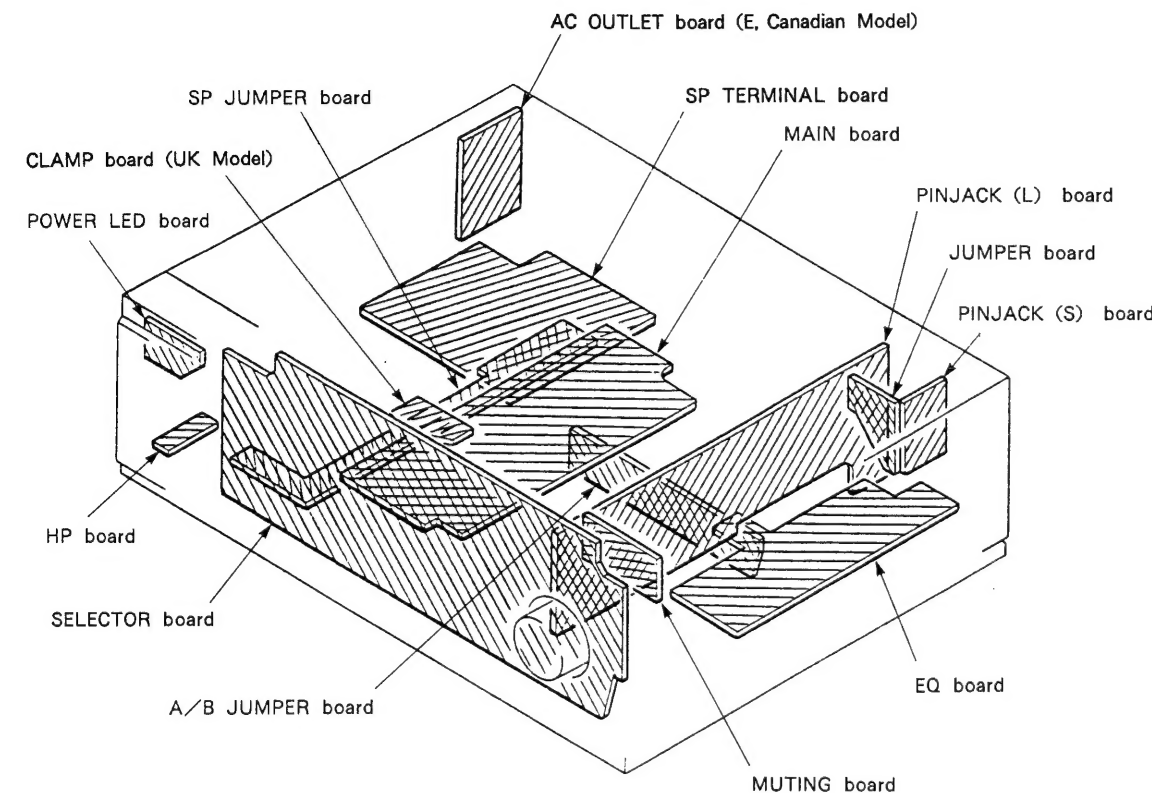
Set the ATTENUATOR control as low as possible and adjust RT301 (L-CH) and RT351 (R-CH) so that the voltmeter reads 7mV at TP301 (L-CH) and TP351 (R-CH).

Adjustment Location: power board



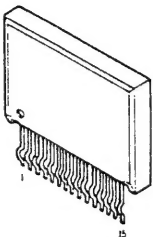
SECTION 3 DIAGRAMS

CIRCUIT BOARD LOCATION



● Semiconductor Lead Layouts

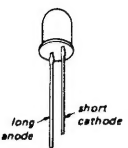
STK-3102-3



2SC3423



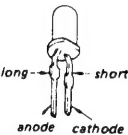
SEL2510C



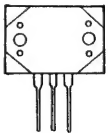
2SD774-3



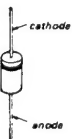
SEL2810A



2SA1215M-0
2SC2921M-0



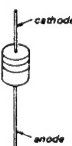
US1060M
UZL-16L
10E2N
30DF2



2SA733-Q
2SA988-F
2SC945-P
2SC2545



HZS-7B2L



2SA985A
2SC2275-P



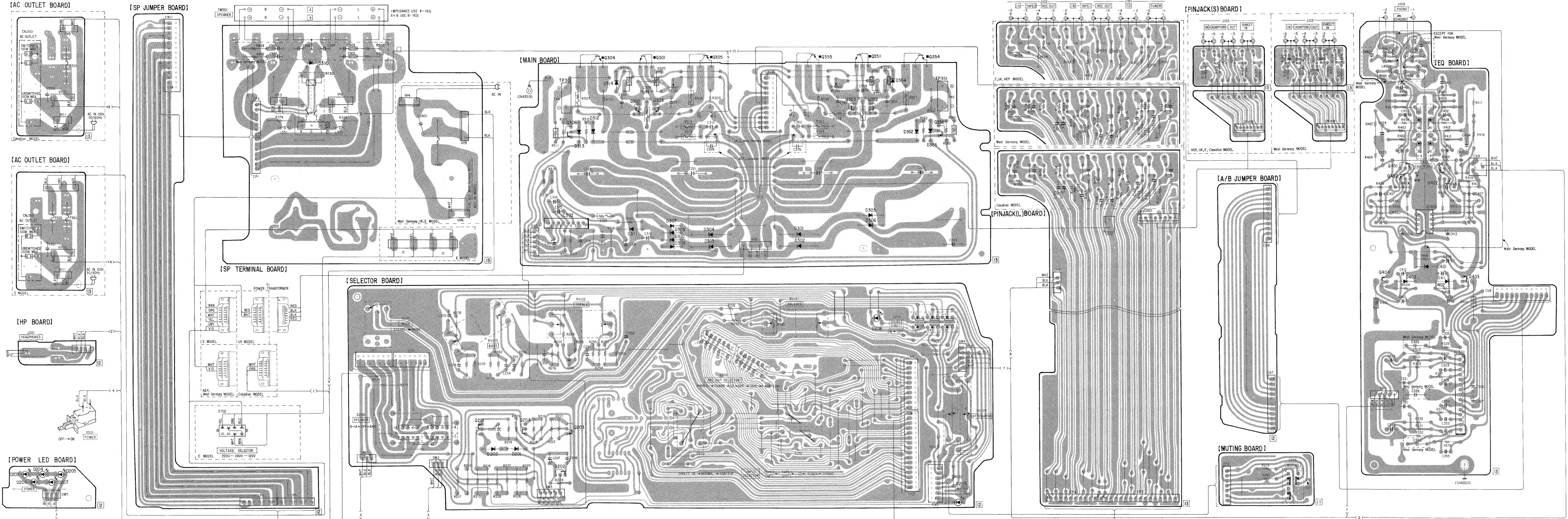
3-1. PRINTED WIRING BOARDS • See page 7 for Semiconductor Lead Layouts.

● Semiconductor Location

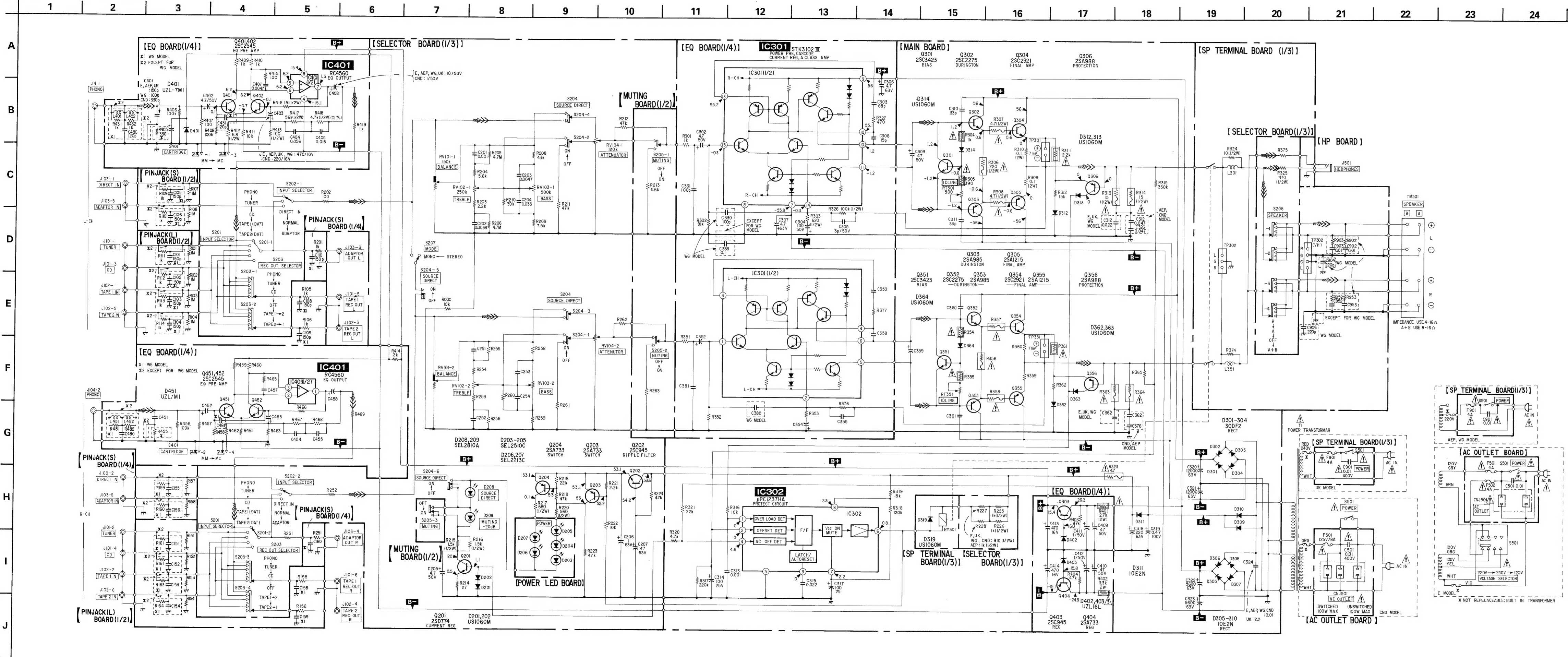
Ref. No.	Location	Ref. No.	Location
D201	J-11	IC301	I-30
D202	J-11	IC302	E-12
D203	J-1	IC401	E-30
D204	J-2		
D205	J-2	Q201	I-10
D206	J-1	Q202	J-12
D207	J-2	Q203	I-12
D208	G-19	Q204	I-11
D209	K-20	Q301	B-14
D301	E-17	Q302	C-14
D302	F-17	Q303	C-14
D303	F-15	Q304	B-13
D304	E-15	Q305	B-15
D305	E-18	Q306	C-12
D306	E-18	Q351	B-18
D307	E-14	Q352	C-18
D308	F-14	Q353	C-18
D309	E-14	Q354	B-19
D310	F-14	Q355	B-17
D311	E-14	Q356	C-20
D312	C-13	Q401	D-30
D313	C-12	Q402	D-30
D314	B-13	Q403	F-31
D319	B-7	Q404	F-21
D362	C-19	Q451	D-29
D363	C-20	Q452	D-29
D364	B-19		
D401	F-30		
D402	F-30		
D403	F-29		

Note on Printed Wiring Boards :

- : parts extracted from the component side.
- : parts mounted on the conductor side.



3-2. SCHEMATIC DIAGRAMS



Note on Schematic Diagrams :

- All capacitors are in μF unless otherwise noted. pF : μF 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and $\frac{1}{4}\text{W}$ or less unless otherwise specified.
- Components for right channel have same values as for left channel.
- \square : nonflammable resistor.
- \square : fusible resistor.

Note:
The components identified by mark Δ or dotted line with mark Δ are critical for safety. Replace only with part number specified.

Note:
Les composants identifiés par une marque Δ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

- \square : adjustment for repair.
- Voltage and waveforms are dc with respect to ground under no-signal conditions.
- no mark : PHONO
- Voltages are taken with a VOM. (Input impedance $10\text{M}\Omega$)
- Voltage variations may be noted due to normal production tolerances.
- Signal path.
- \Rightarrow PHONO
- WG : West Germany
- CND : Canadian

EXPLODED VIEWS



NOTE:


- The mechanical parts with no reference number in the exploded views are not supplied.
- The construction parts of an assembled part are indicated with a collation number in the remark column.
- Items marked "★" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

- Due to standardization, parts with part number suffix -XX and -X may be different from the parts specified in the components used on the set.
- Color Indication of Appearance Parts
Example:
(RED) ... KNOB, BALANCE (WHITE)

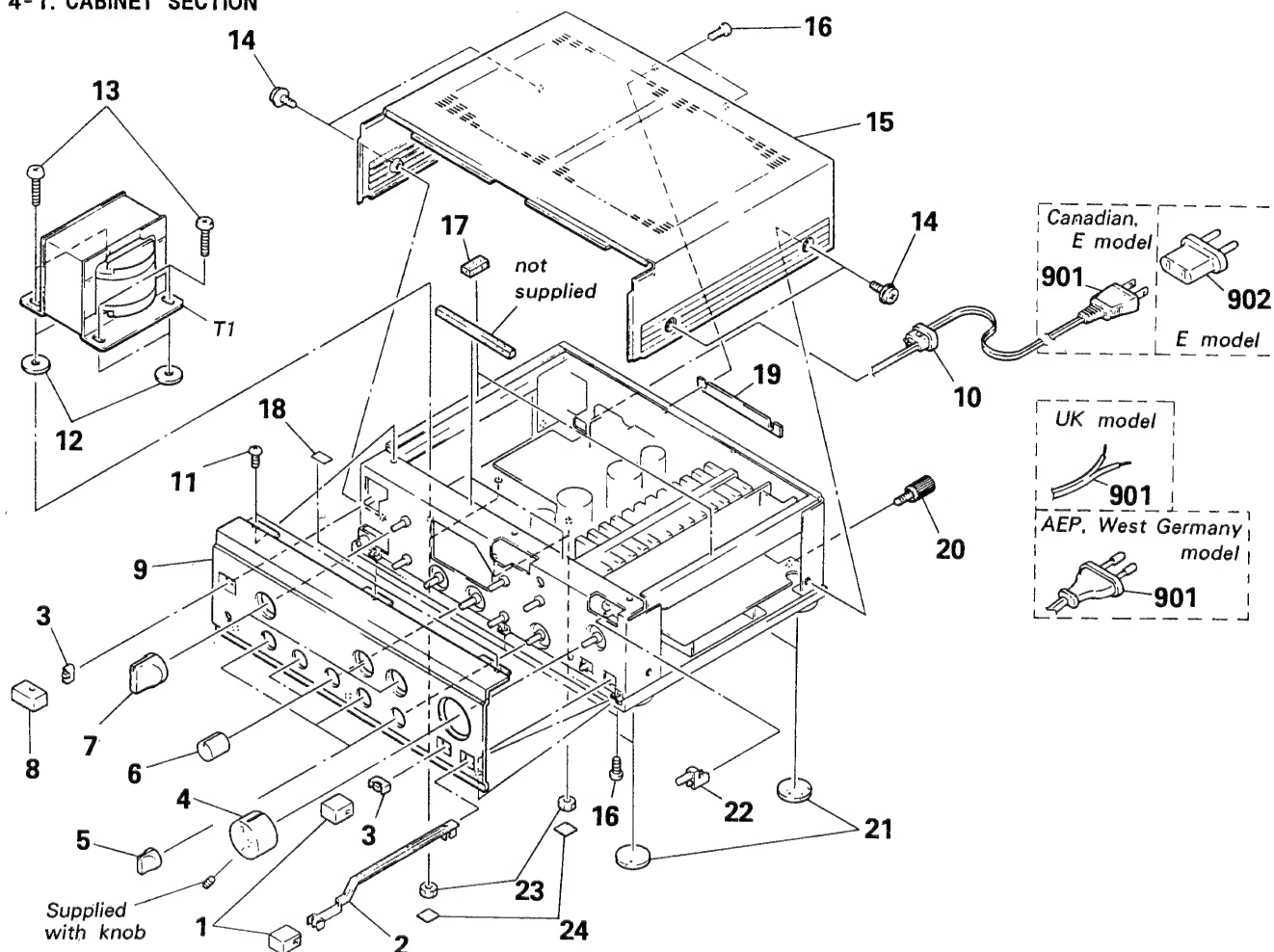
↑
Cabinet's Color

↑
Parts' Color
- WG : West Germany model

The components identified by mark  or dotted line with mark  are critical for safety. Replace only with part number specified.

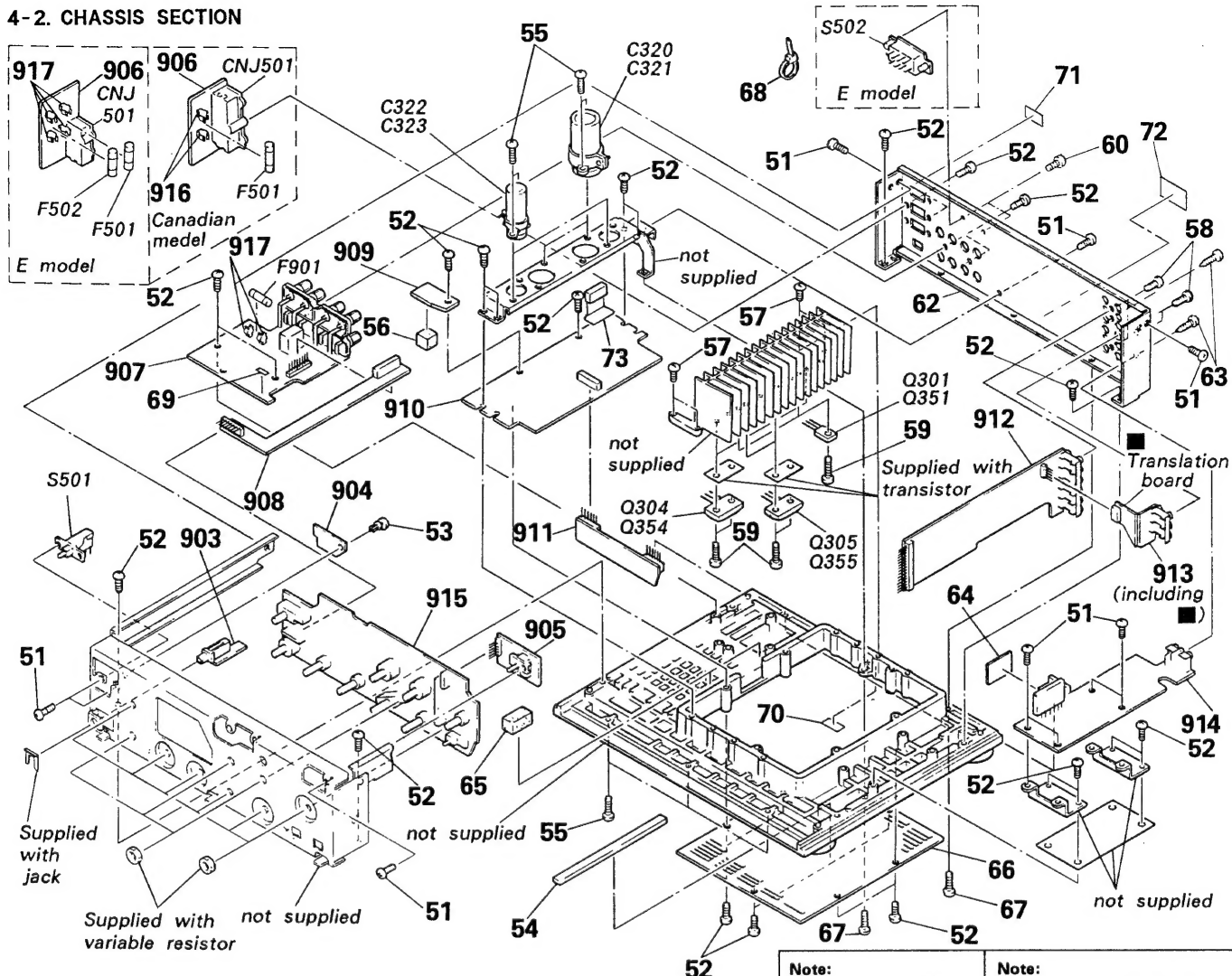
Les composants identifiés par une
marque  sont critiques pour la
sécurité.
Ne les remplacer que par une
pièce portant le numéro spécifié.

4-1. CABINET SECTION



No.	Part No.	Description	Remarks	No.	Part No.	Description	Remarks
1	4-908-875-01	KNOB, SQUARE		16	7-685-873-09	SCREW +BVT 3X10 (S)	
2	4-929-227-01	JOINT		17	*2-527-517-11	(UK)...CUSHION, CASE RETAINER	
3	4-864-307-00	RING		18	*3-840-067-21	(UK)...SPACER (C)	
4	4-929-224-01	KNOB (NA-48)		19	*4-929-232-01	SPACER	
				20	3-706-165-00	SCREW	
5	4-916-745-01	KNOB (DIA.21)					
6	4-916-746-11	KNOB (DIA. 21), ROUND		21	*4-923-850-01	FOOT (DIA. 46)	
7	4-916-729-01	KNOB (DIA.29)		22	4-923-879-01	BUTTON (DIA.4)	
8	4-908-856-01	KNOB, SQUARE		23	7-684-024-04	N 4, TYPE 2	
				24	*4-929-266-01	CUSHION	
9	A-4317-962-A	(Canadian)...PANEL ASSY, FRONT					
	A-4317-965-A	(AEP,WG,UK)...PANEL ASSY, FRONT		901	△1-551-478-00	(Canadian)...CORD, POWER	
	A-4323-063-A	(E).....PANEL ASSY, FRONT			△1-574-381-11	(E).....CORD, POWER	
10	3-703-244-00	(Canadian,AEP,WG,UK)...BUSHING, CORD			△1-574-804-11	(UK).....CORD, POWER	
	3-703-571-11	(E).....BUSHING (S) (4516), CORD			△1-574-805-11	(AEP,WG).....CORD, POWER	
11	7-682-547-09	SCREW +BVT 3X6 (S)		902	△1-526-565-00	(E)...AC PLUG ADAPTOR	
12	4-885-984-21	(UK)...WASHER		T1	△1-449-685-11	(Canadian)...TRANSFORMER, POWER	
13	7-682-566-09	SCREW +B 4X20		T1	△1-449-687-11	(WG).....TRANSFORMER, POWER	
14	4-847-802-00	SCREW		T1	△1-449-688-11	(AEP).....TRANSFORMER, POWER	
				T1	△1-449-689-11	(UK).....TRANSFORMER, POWER	
15	4-916-737-01	(Canadian,WG,UK,E)...CASE		T1	△1-449-690-11	(E).....TRANSFORMER, POWER	
	4-916-737-21	(AEP).....CASE					

4-2. CHASSIS SECTION



No.	Part No.	Description	Remarks	No.	Part No.	Description	Remarks
51	7-682-547-09	SCREW +BVTT 3X6 (S)		908	*1-629-757-11	PC BOARD, SP JUMPER	
52	7-685-647-79	SCREW +BVTP 3X10 TYPE2 N-S		909	*1-630-146-11	(Canadian)...PC BOARD, CLAMP	
53	4-812-134-00	RIVET NYLON, 3.5		910	*A-4333-335-A	(WG,E).....MOUNTED PCB, MAIN	
54	*4-916-782-21	(UK)...DAMPER			*A-4333-343-A	(Canadian,AEP)...MOUNTED PCB, MAIN	
55	7-685-873-09	SCREW +BVTT 3X10 (S)			*A-4333-725-A	(UK).....MOUNTED PCB, MAIN	
56	*4-921-410-91	(UK)...CUSHION		911	*1-629-750-11	PC BOARD, A/B JUMPER	
57	7-685-650-79	SCREW +BVTP 3X16 TYPE2 SLIT		912	*1-629-758-11	PC BOARD, PINJACK (L)	
				913	*1-629-756-11	PC BOARD, PIN JACK (S)	
59	7-685-648-79	SCREW +BVTP 3X12 TYPE2 IT-3		914	*A-4333-336-A	(WG).....MOUNTED PCB, EQ	
60	7-685-534-19	SCREW +BTP 2.6X8 TYPE2 N-S			*A-4333-341-A	(AEP,E).....MOUNTED PCB, EQ	
					*A-4333-726-A	(UK).....MOUNTED PCB, EQ	
62	*4-929-233-03	(Canadian)...PANEL, BACK			*A-4358-218-A	(Canadian)...MOUNTED PCB, EQ	
	*4-929-233-11	(WG,UK).....PANEL, BACK		915	*A-4410-898-A	(Canadian,WG,UK,E) ...MOUNTED PCB, SELECTOR	
	*4-929-233-21	(AEP)...PANEL, BACK					
	*4-929-280-01	(E).....PANEL, BACK		916	1-533-190-11	(Canadian)...CLIP, FUSE	
63	7-621-849-00	SCREW, TAPPING		917	1-533-183-11	(AEP,WG,UK,E)...HOLDER, FUSE	
64	*4-916-782-61	(Canadian,UK)....DAMPER		C320	1-125-568-11	CAP, ELECT 12000MF	
65	*4-921-410-81	(UK)....CUSHION		C321	1-125-568-11	CAP, ELECT 12000MF	
66	*4-916-732-01	BOARD, BOTTOM		C322	1-125-569-11	CAP, ELECT 5600MF	
67	7-685-876-09	SCREW +BVTT 3X16 (S)		C323	1-125-569-11	CAP, ELECT 5600MF	
68	3-655-653-21	BAND (TATTON), BINDING		CNJ501A1	*540-041-21	(E).....OUTLET, AC (AC OUTLET)	
69	*3-701-948-20	(E)...LABEL (T4A), FUSE		CNJ501A1	*540-062-31	(Canadian)...OUTLET, AC (AC OUTLET)	
70	*3-703-079-21	(Canadian)...LABEL, CAUTION (BACK)		F501	A1-532-350-00	(E)....FUSE, TIME-LAG 4A	
71	*3-703-270-00	(Canadian)...LABEL, AC 120V 60Hz		F501	A1-532-510-00	(Canadian)...FUSE, GLASE TUBE 8A	
72	*4-929-270-01	(Canadian)...LABEL, MODEL NUMBER		F502	A1-532-350-00	(E)....FUSE, TIME-LAG 4A	
	*4-929-272-01	(WG).....LABEL, MODEL NUMBER		F901	A1-532-350-00	(AEP,WG,UK)...FUSE, TIME-LAG 4A	
	*4-929-273-01	(UK).....LABEL, MODEL NUMBER		Q301	8-729-203-45	TRANSISTOR 2SC3423	
	*4-929-274-01	(E).....LABEL, MODEL NUMBER		Q304	8-729-320-03	TRANSISTOR 2SC2921M-0	
	*4-931-906-01	(AEP).....LABEL, MODEL NUMBER		Q305	8-729-320-01	TRANSISTOR 2SA1215M-0	
73	*4-921-941-31	(UK)....CUSHION (FL)		Q351	8-729-203-45	TRANSISTOR 2SC3423	
903	*1-629-749-11	PC BOARD, HP		Q354	8-729-320-03	TRANSISTOR 2SC2921M-0	
904	*1-629-751-11	PC BOARD, POWER LED		Q355	8-729-320-01	TRANSISTOR 2SA1215M-0	
905	*1-629-747-11	PC BOARD, MUTING		S501	A1-554-920-31	SWITCH, PUSH (AC POWER)(1 KEY)(POWER)	
906	*1-629-755-11	PC BOARD, AC OUTLET		S502	A1-570-307-11	(E)....SWITCH, VOLTAGE CHANGE	
907	*1-629-753-11	PC BOARD, SP TERMINAL				(VOLTAGE SELECTOR)	

SECTION 5

ELECTRICAL PARTS LIST

NOTE:

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- Items marked "★" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- If there are two or more same circuits in a set such as a stereophonic machine, only typical circuit parts may be indicated and capacitors and resistors in other same circuits may be omitted.

CAPACITORS:

MF: μF , PF: $\mu\mu F$.

RESISTORS

- All resistors are in ohms.
- F: nonflammable

COILS

- MMH: mH, UH: μH

SEMICONDUCTORS

In each case, U: μ , for example:

UA....: μA ..., UPA....: μPA ...,
UPC....: μPC , UPD....: μPD ...

- WG : West Germany model



The components identified by mark Δ or dotted line with mark Δ are critical for safety. Replace only with part number specified.


Les composants identifiés par une marque Δ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

Ref.No.	Part No.	Description	Ref.No.	Part No.	Description
901	Δ 1-551-478-00	(Canadian)...CORD, POWER	C203	1-130-479-00	MYLAR 0.0047MF 5% 50V
	Δ 1-574-381-11	(E).....CORD, POWER	C204	1-136-159-00	FILM 0.033MF 5% 50V
	Δ 1-574-804-11	(UK).....CORD, POWER	C205	1-123-369-00	ELECT 4.7MF 20% 50V
	Δ 1-574-805-11	(AEP,WG)....CORD, POWER			
902	Δ 1-526-565-00	(E)....AC PLUG ADAPTOR	C206	1-123-380-00	ELECT 1MF 20% 63V
903	*1-629-749-11	PC BOARD, HP	C207	1-124-918-11	ELECT 47MF 20% 63V
904	*1-629-751-11	PC BOARD, POWER LED	C251	1-130-471-00	MYLAR 0.001MF 5% 50V
905	*1-629-747-11	PC BOARD, MUTING	C252	1-130-478-00	MYLAR 0.0039MF 5% 50V
906	*1-629-755-11	PC BOARD, AC OUTLET	C253	1-130-479-00	MYLAR 0.0047MF 5% 50V
907	*1-629-753-11	PC BOARD, SP TERMINAL	C254	1-136-159-00	FILM 0.033MF 5% 50V
908	*1-629-757-11	PC BOARD, SP JUMPER	C302	1-123-369-00	ELECT 4.7MF 20% 50V
909	*1-630-146-11	(Canadian)...PC BOARD, CLAMP	C303	1-101-888-00	(E,AEP,WG)...CERAMIC 68PF 5% 50V
910	*A-4333-335-A	(WG,E).....MOUNTED PCB, MAIN	C303	1-104-276-00	(Canadian,UK) ...POLYSTYRENE 68PF 10% 50V
	*A-4333-343-A	(Canadian,AEP)....MOUNTED PCB, MAIN	C304	1-123-360-00	(E,AEP,WG).....ELECT 100MF 20% 50V
	*A-4333-725-A	(UK).....MOUNTED PCB, MAIN	C304	1-126-052-11	(Canadian,UK)...ELECT 100MF 20% 50V
911	*1-629-750-11	PC BOARD, A/B JUMPER	C305	1-102-936-00	(E,AEP,WG)...CERAMIC 3PF 0.5PF 50V
912	*1-629-758-11	PC BOARD, PINJACK (L)	C305	1-107-276-11	(Canadian,UK)...MICA 3PF 0.5% 500V
913	*1-629-756-11	PC BOARD, PIN JACK (S)	C306	1-123-369-00	(E,AEP,WG)...ELECT 4.7MF 20% 63V
914	*A-4333-336-A	(WG).....MOUNTED PCB, EQ	C307	1-123-369-00	(E,AEP,WG)...ELECT 4.7MF 20% 63V
	*A-4333-341-A	(AEP,E).....MOUNTED PCB, EQ	C308	1-102-951-00	(E,AEP,WG)...CERAMIC 15PF 5% 50V
	*A-4333-726-A	(UK).....MOUNTED PCB, EQ	C308	1-104-263-00	(Canadian,UK) ...POLYSTYRENE 15PF 10% 125V
	*A-4358-218-A	(Canadian)...MOUNTED PCB, EQ			
915	*A-4410-898-A	(Canadian,WG,UK,E) ...MOUNTED PCB, SELECTOR	C309	1-123-359-00	(E,AEP,WG,Canadian) ...ELECT 47MF 20% 50V
916	1-533-190-11	(Canadian)...CLIP, FUSE	C309	1-124-910-11	(UK).....ELECT 47MF 20% 50V
917	1-533-183-11	(AEP,WG,UK,E)...HOLDER, FUSE	C310	1-102-963-00	(E,AEP,WG,Canadian) ...CERAMIC 33PF 5% 50V
C101	1-162-284-31	(WG)...CERAMIC 150PF 10% 50V	C310	1-107-159-00	(UK).....MICA 33PF 5% 500V
C102	1-162-284-31	(WG)...CERAMIC 150PF 10% 50V	C311	1-102-963-00	(E,AEP,WG,Canadian) ...CERAMIC 33PF 5% 50V
C103	1-162-284-31	(WG)...CERAMIC 150PF 10% 50V	C311	1-107-159-00	(UK).....MICA 33PF 5% 500V
C104	1-162-284-31	(WG)...CERAMIC 150PF 10% 50V	C312	1-130-487-00	(E,WG,UK).....MYLAR 0.022MF 5% 50V
C105	1-162-284-31	(WG)...CERAMIC 150PF 10% 50V	C312	1-136-161-00	(AEP,Canadian)...FILM 0.047MF 5% 50V
C106	1-162-284-31	(WG)...CERAMIC 150PF 10% 50V	C313	1-130-471-00	MYLAR 0.001MF 5% 50V
C108	1-162-284-31	(WG)...CERAMIC 150PF 10% 50V	C314	1-123-333-00	ELECT 100MF 20% 25V
C109	1-162-284-31	(WG)...CERAMIC 150PF 10% 50V	C315	1-130-487-00	MYLAR 0.022MF 5% 50V
C151	1-162-284-31	(WG)...CERAMIC 150PF 10% 50V	C317	1-123-333-00	ELECT 100MF 20% 25V
C152	1-162-284-31	(WG)...CERAMIC 150PF 10% 50V	C318	1-123-604-00	ELECT 220MF 20% 63V
C153	1-162-284-31	(WG)...CERAMIC 150PF 10% 50V	C319	1-123-379-00	ELECT 0.47MF 20% 100V
C154	1-162-284-31	(WG)...CERAMIC 150PF 10% 50V	C320	1-125-568-11	CAP, ELECT 12000MF
C155	1-162-284-31	(WG)...CERAMIC 150PF 10% 50V	C321	1-125-568-11	CAP, ELECT 12000MF
C156	1-162-284-31	(WG)...CERAMIC 150PF 10% 50V	C322	1-125-569-11	CAP, ELECT 5600MF
C158	1-162-284-31	(WG)...CERAMIC 150PF 10% 50V	C323	1-125-569-11	CAP, ELECT 5600MF
C159	1-162-284-31	(WG)...CERAMIC 150PF 10% 50V			
C201	1-130-471-00	MYLAR 0.001MF 5% 50V			
C202	1-130-478-00	MYLAR 0.0039MF 5% 50V			

Ref.No.	Part No.	Description
C324	1-136-601-11	(E,AEP,WG,Canadian) ...FILM 0.01MF 10% 630V
C324	1-136-880-11	(UK).....FILM 2.2MF 10% 160V
C326	1-136-161-00	(AEP,Canadian)...FILM 0.047MF 5% 50V
C330	1-162-282-31	(WG).....CERAMIC 100PF 5% 50V
C331	1-102-973-00	(E,AEP,WG)...CERAMIC 100PF 5% 50V
C331	1-136-808-11	(UK,Canadian)...FILM 100MF 5% 100V
C333	1-161-370-00	(WG)...CERAMIC 0.01MF 30% 25V
C352	1-123-369-00	ELECT 4.7MF 20% 50V
C353	1-101-888-00	(E,AEP,WG)...CERAMIC 68PF 5% 50V
C353	1-104-276-00	(Canadian,UK) ...POLYSTYRENE 68PF 10% 50V
C354	1-123-360-00	(E,AEP,WG)...ELECT 100MF 20% 50V
C354	1-126-052-11	(Canadian,UK) ...ELECT 100PF 20% 50V
C355	1-102-936-00	(E,AEP,WG)...CERAMIC 3PF 0.5PF 50V
C355	1-107-276-11	(Canadian,UK)...MAIC 3PF 0.5PF 500V
C358	1-102-951-00	(E,AEP,WG)...CERAMIC 15PF 5% 50V
C358	1-104-263-00	(Canadian,UK) ...POLYSTYRENE 15PF 10% 125V
C359	1-123-359-00	(E,AEP,WG,Canadian) ...ELECT 47MF 20% 50V
C359	1-124-910-11	(UK).....ELECT 47MF 20% 50V
C360	1-102-963-00	(E,AEP,WG,Canadian) ...CERAMIC 33PF 5% 50V
C360	1-107-159-00	(UK).....MICA 33MF 5% 500V
C361	1-102-963-00	(E,AEP,WG,Canadian) ...CERAMIC 33PF 5% 50V
C361	1-107-159-00	(UK).....MICA 33MF 5% 500V
C362	1-130-487-00	(E,WG,UK)...MYLAR 0.022MF 5% 50V
C362	1-136-161-00	(AEP,Canadian) ...FILM 0.047MF 5% 50V
C376	1-136-161-00	(AEP,Canadian) ...FILM 0.047MF 5% 50V
C380	1-162-282-31	(WG)...CERAMIC 100PF 5% 50V
C381	1-102-973-00	(E,AEP,WG)...CERAMIC 100PF 5% 50V
C381	1-136-808-11	(Canadian,UK)...FILM 100PF 5% 100V
C401	1-101-361-00	(E,AEP).....CERAMIC 150PF 5% 50V
C401	1-102-112-00	(Canadian)...CERAMIC 330PF 10% 50V
C401	1-102-973-00	(WG).....CERAMIC 100PF 5% 50V
C401	1-104-282-11	(UK).....POLYSTYRENE 150PF 5% 50V
C402	1-123-369-00	ELECT 4.7MF 20% 50V
C403	1-124-472-11	(AEP,E,WG)...ELECT 470MF 20% 10V
C403	1-124-120-11	(Canadian)...ELECT 220MF 20% 16V
C403	1-126-103-11	(UK).....ELECT 470MF 20% 10V
C404	1-130-341-00	(UK,Canadian)...FILM 0.056MF 3% 100V
C404	1-136-162-00	(AEP,E,WG).....FILM 0.056MF 5% 50V
C405	1-130-971-00	(UK,Canadian)...FILM 0.016MF 3% 100V
C405	1-136-032-51	(AEP,E,WG).....FILM 0.016MF 5% 50V
C406	1-123-333-00	ELECT 100MF 20% 16V
C407	1-130-479-00	MYLAR 0.0047MF 5% 50V
C408	1-123-356-00	(E,AEP,WG)...ELECT 10MF 20% 50V
C408	1-123-380-00	(Canadian)...ELECT 1MF 20% 50V
C408	1-126-059-11	(UK).....ELECT 10MF 20% 50V
C409	1-123-359-00	(E,AEP,WG).....ELECT 47MF 20% 50V
C409	1-124-910-11	(UK,Canadian)...ELECT 47MF 20% 50V



C410	1-123-359-00	(E,AEP,WG).....ELECT 47MF 20% 50V
C410	1-124-910-11	(UK,Canadian)...ELECT 47MF 20% 50V
C411	1-123-380-00	ELECT 1MF 20% 50V
C412	1-123-380-00	ELECT 1MF 20% 50V
C413	1-126-103-11	ELECT 470MF 20% 16V
C414	1-126-103-11	ELECT 470MF 20% 16V
C430	1-102-816-00	(WG)...CERAMIC 120PF 5% 50V
C431	1-162-282-31	(WG)...CERAMIC 100PF 5% 50V
C451	1-101-361-00	(E,AEP).....CERAMIC 150PF 5% 50V
C451	1-102-112-00	(Canadian)...CERAMIC 330PF 10% 50V
C451	1-102-973-00	(WG).....CERAMIC 100PF 5% 50V
C451	1-104-282-11	(UK).....POLYSTYRENE 150PF 5% 50V
C452	1-123-369-00	ELECT 4.7MF 20% 50V
C453	1-124-472-11	(E,AEP,WG)...ELECT 470MF 20% 10V
C453	1-124-120-11	(Canadian)...ELECT 220MF 20% 16V
C453	1-126-103-11	(UK).....ELECT 470MF 20% 10V
C454	1-130-341-00	(UK,Canadian)...FILM 0.056MF 3% 100V
C454	1-136-162-00	(E,AEP,WG).....FILM 0.056MF 5% 50V
C455	1-130-971-00	(UK,Canadian)...FILM 0.016MF 3% 100V
C455	1-136-032-51	(E,AEP,WG).....FILM 0.016MF 5% 50V
C457	1-130-479-00	MYLAR 0.0047MF 5% 50V
C458	1-123-356-00	(E,AEP,WG)...ELECT 10MF 20% 50V
C458	1-123-380-00	(Canadian)...ELECT 1MF 20% 50V
C458	1-126-059-11	(UK).....ELECT 10MF 20% 50V
C480	1-102-816-00	(WG)...CERAMIC 120PF 5% 50V
C481	1-162-282-31	(WG)...CERAMIC 100PF 5% 50V
C501	1-161-744-00	CERAMIC 0.01MF 400V
C902	1-136-153-00	(UK)...FILM 0.01MF 5% 50V
C903	1-136-153-00	(UK)...FILM 0.01MF 5% 50V
C904	1-102-978-00	(WG)...CERAMIC 220PF 5% 50V
C952	1-136-153-00	(UK)...FILM 0.01MF 5% 50V
C953	1-136-153-00	(UK)...FILM 0.01MF 5% 50V
C954	1-102-978-00	(WG)...CERAMIC 220PF 5% 50V
CN1	*1-561-651-00	SOCKET, CONNECTOR 7P
CN2	*1-561-651-00	SOCKET, CONNECTOR 7P
CN3	1-568-118-11	SOCKET, CONNECTOR 16P
CN4	*1-562-334-00	SOCKET, CONNECTOR 10P
CN5	*1-561-651-00	SOCKET, CONNECTOR 7P
CN6	1-568-203-11	PIN, CONNECTOR (PC BOARD) 11P
CN7	1-568-203-11	PIN, CONNECTOR (PC BOARD) 11P
CN8	*1-563-381-11	SOCKET, CONNECTOR 11P
CN9	*1-566-451-11	HOUSING, CONNECTOR 3P
CN10	*1-563-381-11	SOCKET, CONNECTOR 11P
CN11	1-568-117-11	SOCKET, CONNECTOR 14P
CN12	*1-565-484-11	CONNECTOR, BOARD TO BOARD 8P
CNJ501A1	1-540-041-21	(E)....OUTLET, AC (AC OUT LET)
CNJ501A1	1-540-062-31	(Canadian)...OUTLET, AC (AC OUT LET)
CNP604*	1-508-694-00	CONNECTOR PIN 8P
CP1	*1-560-532-00	PIN, CONNECTOR 7P
CP2	*1-560-532-00	PIN, CONNECTOR 7P
CP4	*1-568-202-11	PIN, CONNECTOR (PC BOARD) 10P


Note:
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Note:
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Ref.No.	Part No.	Description
CP5	1-568-120-11	PIN, CONNECTOR (PC BOARD) 7P
CP6	1-568-120-11	PIN, CONNECTOR (PC BOARD) 7P
CP7	*1-568-204-11	PIN, CONNECTOR (PC BOARD) 16P
D201	8-719-000-26	DIODE US1060M
D202	8-719-000-26	DIODE US1060M
D203	8-719-303-00	DIODE SEL2510C
D204	8-719-303-00	DIODE SEL2510C
D205	8-719-303-00	DIODE SEL2510C
D206	8-719-300-82	DIODE SEL2213C
D207	8-719-300-82	DIODE SEL2213C
D208	8-719-301-49	DIODE SEL2810A
D209	8-719-301-49	DIODE SEL2810A
D301	8-719-230-02	DIODE 30DF2
D302	8-719-230-02	DIODE 30DF2
D303	8-719-230-02	DIODE 30DF2
D304	8-719-230-02	DIODE 30DF2
D305	8-719-200-77	DIODE 10E2N
D306	8-719-200-77	DIODE 10E2N
D307	8-719-200-77	DIODE 10E2N
D308	8-719-200-77	DIODE 10E2N
D309	8-719-200-77	DIODE 10E2N
D310	8-719-200-77	DIODE 10E2N
D311	8-719-200-77	DIODE 10E2N
D312	8-719-000-26	DIODE US1060M
D313	8-719-000-26	DIODE US1060M
D314	8-719-000-26	DIODE US1060M
D319	8-719-000-26	DIODE US1060M
D362	8-719-000-26	DIODE US1060M
D363	8-719-000-26	DIODE US1060M
D364	8-719-000-26	DIODE US1060M
D401	8-719-933-47	DIODE HZS7B2L
D402	8-719-001-97	DIODE UZL-16L
D403	8-719-001-97	DIODE UZL-16L
EH2	*1-564-508-11	PLUG, CONNECTOR 5P
EH3	*1-564-508-11	PLUG, CONNECTOR 5P
F501	△1-532-350-00	(E).....FUSE, TIME-LAG 4A
F501	△1-532-510-00	(Canadian)....FUSE, GLASE TUBE 8A
F502	△1-532-350-00	(E).....FUSE, TIME-LAG 4A
F901	△1-532-350-00	(AEP,WG,UK)...FUSE, TIME-LAG 4A
IC301	8-749-920-70	IC STK3102-3
IC302	8-759-111-68	IC UPC1237HA
IC401	8-759-981-96	IC RC4560D
J101	1-565-320-51	JACK, PIN 6P (TUNER/CD/TAPE1,RECOUT)
J102	1-565-320-41	JACK, PIN 6P (TAPE2/REC OUT)
J103	1-565-320-51	JACK, PIN 6P (ADAPTOR IN,OUT/DIRECT IN)
J104	1-568-250-11	JACK, PIN 2P (PHONO)
L301	*1-420-872-00	(E,AEP,WG,UK)...COIL, AIR CORE
L301	*1-420-872-31	(Canadian).....COIL, AIR CORE
L351	*1-420-872-00	(E,AEP,WG,UK)...COIL, AIR CORE
L351	*1-420-872-31	(Canadian).....COIL, AIR CORE
L401	1-413-101-00	(WG)...COIL INPUT
L402	1-413-101-00	(WG)...COIL INPUT
L451	1-413-101-00	(WG)...COIL INPUT
L452	1-413-101-00	(WG)...COIL INPUT
Q201	8-729-177-42	TRANSISTOR 2SD774-3
Q202	8-729-194-57	TRANSISTOR 2SC945P
Q203	8-729-713-36	TRANSISTOR 2SA733Q

Ref.No.	Part No.	Description
Q204	8-729-713-36	TRANSISTOR 2SA733Q
Q301	8-729-203-45	TRANSISTOR 2SC3423
Q302	8-729-127-53	TRANSISTOR 2SC2275-P
Q303	8-729-190-53	TRANSISTOR 2SA985A
Q304	8-729-320-03	TRANSISTOR 2SC2921M-0
Q305	8-729-320-01	TRANSISTOR 2SA1215M-0
Q306	8-729-108-04	TRANSISTOR 2SA988F
Q351	8-729-203-45	TRANSISTOR 2SC3423
Q352	8-729-127-53	TRANSISTOR 2SC2275-P
Q353	8-729-190-53	TRANSISTOR 2SA985A-P
Q354	8-729-320-03	TRANSISTOR 2SC2921M-0
Q355	8-729-320-01	TRANSISTOR 2SA1215M-0
Q356	8-729-108-04	TRANSISTOR 2SA988F
Q401	8-729-354-52	TRANSISTOR 2SC2545
Q402	8-729-354-52	TRANSISTOR 2SC2545
Q403	8-729-194-57	TRANSISTOR 2SC945P
Q404	8-729-173-36	TRANSISTOR 2SA733Q
Q451	8-729-354-52	TRANSISTOR 2SC2545
Q452	8-729-354-52	TRANSISTOR 2SC2545
R000	1-247-725-11	CARBON 10K 5% 1/4W
R101	1-246-545-00	CARBON 1M 5% 1/4W
R102	1-246-545-00	CARBON 1M 5% 1/4W
R103	1-246-545-00	CARBON 1M 5% 1/4W
R104	1-246-545-00	CARBON 1M 5% 1/4W
R105	1-247-713-11	CARBON 1K 5% 1/4W
R106	1-249-417-11	CARBON 1K 5% 1/4W
R107	1-246-545-00	CARBON 1M 5% 1/4W
R108	1-246-545-00	CARBON 1M 5% 1/4W
R109	1-249-417-11	(WG)...CARBON 1K 5% 1/4W
R110	1-249-417-11	(WG)...CARBON 1K 5% 1/4W
R111	1-249-417-11	(WG)...CARBON 1K 5% 1/4W
R112	1-249-417-11	(WG)...CARBON 1K 5% 1/4W
R113	1-249-417-11	(WG)...CARBON 1K 5% 1/4W
R114	1-249-417-11	(WG)...CARBON 1K 5% 1/4W
R151	1-246-545-00	CARBON 1M 5% 1/4W
R152	1-246-545-00	CARBON 1M 5% 1/4W
R153	1-246-545-00	CARBON 1M 5% 1/4W
R154	1-246-545-00	CARBON 1M 5% 1/4W
R155	1-247-713-11	CARBON 1K 5% 1/4W
R156	1-249-417-11	CARBON 1K 5% 1/4W
R157	1-246-545-00	CARBON 1M 5% 1/4W
R158	1-246-545-00	CARBON 1M 5% 1/4W
R159	1-249-417-11	(WG)...CARBON 1K 5% 1/4W
R160	1-249-417-11	(WG)...CARBON 1K 5% 1/4W
R161	1-249-417-11	(WG)...CARBON 1K 5% 1/4W
R162	1-249-417-11	(WG)...CARBON 1K 5% 1/4W
R163	1-249-417-11	(WG)...CARBON 1K 5% 1/4W
R164	1-249-417-11	(WG)...CARBON 1K 5% 1/4W
R201	1-249-417-11	CARBON 1K 5% 1/4W
R202	1-247-700-11	CARBON 100 5% 1/4W
R203	1-247-717-11	CARBON 2.2K 5% 1/4W
R204	1-247-722-11	CARBON 5.6K 5% 1/4W
R205	1-249-753-15	CARBON 4.7M 5% 1/4W
R206	1-249-753-15	CARBON 4.7M 5% 1/4W
R208	1-247-170-00	CARBON 43K 5% 1/4W

Note:
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Ref.No.	Part No.	Description			
R209	1-247-152-00	CARBON	7.5K	5%	1/4W
R210	1-249-464-11	CARBON	39K	5%	1/4W
R211	1-249-465-11	CARBON	47K	5%	1/4W
R212	1-249-465-11	CARBON	47K	5%	1/4W
R213	1-247-722-11	CARBON	5.6K	5%	1/4W
R214	1-247-693-11	CARBON	27	5%	1/4W
R215	1-247-754-11	CARBON	1.5K	5%	1/2W
R216	1-247-754-11	CARBON	1.5K	5%	1/2W
R217	1-247-750-11	CARBON	680	5%	1/2W
R218	1-249-462-11	CARBON	22K	5%	1/4W
R219	1-249-465-11	CARBON	47K	5%	1/4W
R220	1-247-749-11	CARBON	560	5%	1/2W
R221	1-247-717-11	CARBON	2.2K	5%	1/4W
R222	1-247-725-11	CARBON	10K	5%	1/4W
R223	1-249-465-11	CARBON	47K	5%	1/4W
R224	1-247-721-11	CARBON	4.7K	5%	1/4W
R225	1-247-752-11	CARBON	1K	5%	1/2W
R226	1-247-752-11	CARBON	1K	5%	1/2W
R227	1-247-752-11	(E,WG,Canadian,UK) ...CARBON	1K	5%	1/2W
R227	1-247-239-00	(AEP)...CARBON	910	5%	1/2W
R228	1-247-752-11	(E,WG,Canadian,UK) ...CARBON	1K	5%	1/2W
R228	1-247-239-00	(AEP)...CARBON	910	5%	1/2W
R251	1-249-417-11	CARBON	1K	5%	1/4W
R252	1-247-700-11	CARBON	100	5%	1/4W
R253	1-247-717-11	CARBON	2.2K	5%	1/4W
R254	1-247-722-11	CARBON	5.6K	5%	1/4W
R255	1-249-753-15	CARBON	4.7M	5%	1/4W
R256	1-249-753-15	CARBON	4.7M	5%	1/4W
R258	1-247-170-00	CARBON	43K	5%	1/4W
R259	1-247-152-00	CARBON	7.5K	5%	1/4W
R260	1-249-464-11	CARBON	39K	5%	1/4W
R261	1-249-465-11	CARBON	47K	5%	1/4W
R262	1-249-465-11	CARBON	47K	5%	1/4W
R263	1-247-722-11	CARBON	5.6K	5%	1/4W
R301	1-247-713-11	CARBON	1K	5%	1/4W
R302	1-249-599-11	CARBON	91K	5%	1/4W
R303	1-249-668-11	CARBON	620	5%	1/2W
R304	1-247-713-11	CARBON	1K	5%	1/4W
R305	1-247-707-11	CARBON	390	5%	1/4W
R306	1-212-990-00	FUSIBLE	220	5%	1/2W F
R307	1-212-950-00	FUSIBLE	4.7	5%	1/2W F
R308	1-212-950-00	FUSIBLE	4.7	5%	1/2W F
R309	1-217-611-00	METAL PLATE	0.1	10%	2W
R310	1-217-611-00	METAL PLATE	0.1	10%	2W
R311	1-247-717-11	CARBON	2.2K	5%	1/4W F
R312	1-249-460-11	CARBON	15K	5%	1/4W
R313	1-212-962-00	FUSIBLE	15	5%	1/2W F
R314	1-212-962-00	FUSIBLE	15	5%	1/2W F
R315	1-247-891-00	CARBON	330K	5%	1/4W
R316	1-247-725-11	CARBON	10K	5%	1/4W
R317	1-247-887-00	CARBON	220K	5%	1/4W
R318	1-247-881-00	CARBON	120K	5%	1/4W
R319	1-249-461-11	CARBON	18K	5%	1/4W
R320	1-247-721-11	CARBON	4.7K	5%	1/4W
R321	1-249-462-11	CARBON	22K	5%	1/4W
R323	1-212-849-00	FUSIBLE	4.7	5%	1/4W F
R324	1-247-727-11	CARBON	10	5%	1/2W
R325	1-247-747-11	CARBON	470	5%	1/2W

Ref.No.	Part No.	Description			
R326	1-249-721-11	CARBON	100K	5%	1/2W
R327	1-247-708-11	CARBON	470	5%	1/4W
R351	1-247-713-11	CARBON	1K	5%	1/4W
R352	1-249-599-11	CARBON	91K	5%	1/4W
R353	1-249-668-11	CARBON	620	5%	1/2W
R354	1-247-713-11	CARBON	1K	5%	1/4W
R355	1-247-707-11	CARBON	390	5%	1/4W
R356	1-212-990-00	FUSIBLE	220	5%	1/2W F
R357	1-212-950-00	FUSIBLE	4.7	5%	1/2W F
R358	1-212-950-00	FUSIBLE	4.7	5%	1/2W F
R359	1-217-611-00	METAL PLATE	0.1	10%	2W
R360	1-217-611-00	METAL PLATE	0.1	10%	2W
R361	1-247-717-11	CARBON	2.2K	5%	1/4W F
R362	1-249-460-11	CARBON	15K	5%	1/4W
R363	1-212-962-00	FUSIBLE	15	5%	1/2W F
R364	1-212-962-00	FUSIBLE	15	5%	1/2W F
R365	1-247-891-00	CARBON	330K	5%	1/4W
R374	1-247-727-11	CARBON	10	5%	1/2W
R375	1-247-747-11	CARBON	470	5%	1/2W
R376	1-249-721-11	CARBON	100K	5%	1/2W
R377	1-247-708-11	CARBON	470	5%	1/4W
R401	1-216-459-00	METAL OXIDE	2.7K	5%	2W F
R402	1-215-895-11	METAL OXIDE	3.3K	5%	2W F
R403	1-247-721-11	CARBON	4.7K	5%	1/4W
R404	1-247-721-11	CARBON	4.7K	5%	1/4W
R405	1-247-706-11	(E,AEP,UK,Canadian) ...CARBON	330	5%	1/4W
R406	1-249-469-11	CARBON	100K	5%	1/4W
R407	1-247-700-11	CARBON	100	5%	1/4W
R408	1-249-469-11	CARBON	100K	5%	1/4W
R409	1-247-713-11	CARBON	1K	5%	1/4W
R410	1-247-713-11	CARBON	1K	5%	1/4W
R411	1-247-725-11	CARBON	10K	5%	1/4W
R412	1-249-484-11	CARBON	6.8	5%	1/2W
R413	1-247-739-11	CARBON	100	5%	1/2W
R414	1-247-138-00	CARBON	2K	5%	1/4W
R415	1-247-700-11	CARBON	100	5%	1/4W
R416	1-214-937-00	CARBON	1M	5%	1/2W
R417	1-249-844-11	CARBON	56K	5%	1/2W
R418	1-249-818-11	CARBON	4.7K	1%	1/2W
R419	1-247-713-11	CARBON	1K	5%	1/4W
R431	1-247-713-11	(WG)...CARBON	1K	5%	1/4W
R432	1-247-713-11	(WG)...CARBON	1K	5%	1/4W
R455	1-247-706-11	(E,AEP,UK,Canadian) ...CARBON	330	5%	1/4W
R456	1-249-469-11	CARBON	100K	5%	1/4W
R457	1-247-700-11	CARBON	100	5%	1/4W
R458	1-249-469-11	CARBON	100K	5%	1/4W
R459	1-247-713-11	CARBON	1K	5%	1/4W
R460	1-247-713-11	CARBON	1K	5%	1/4W
R461	1-247-725-11	CARBON	10K	5%	1/4W
R462	1-249-484-11	CARBON	6.8	5%	1/2W
R463	1-247-739-11	CARBON	100	5%	1/2W
R465	1-247-700-11	CARBON	100	5%	1/4W

Note:
The components identified by mark Δ or dotted line with mark Δ are critical for safety. Replace only with part number specified.

Note:
Les composants identifiés par une marque Δ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

Ref.No.	Part No.	Description
R466	1-214-937-00	CARBON 1M 5% 1/2W
R467	1-249-844-11	CARBON 56K 5% 1/2W
R468	1-249-818-11	CARBON 4.7K 1% 1/2W
R469	1-247-713-11	CARBON 1K 5% 1/4W
R481	1-247-713-11	(WG)...CARBON 1K 5% 1/4W
R482	1-247-713-11	(WG)...CARBON 1K 5% 1/4W
R902	1-247-727-11	(WG)...CARBON 10 5% 1/2W
R903	1-247-727-11	(WG)...CARBON 10 5% 1/2W
RT301	1-237-455-11	RES, ADJ, CARBON 500
RT351	1-237-455-11	RES, ADJ, CARBON 500
RV101	1-238-448-11	RES, VAR, CARBON 150K /150K (BALANCE)
RV102	1-238-446-11	RES, VAR, CARBON 250K /250K (TREBLE)
RV103	1-238-447-11	RES, VAR, CARBON 25K /500K (BASS)
RV104	1-237-472-11	RES, VAR, CARBON 120K /120K (ATTENUATOR)
RY301	1-515-501-00	RELAY
S201	1-571-824-11	SWITCH, ROTARY (INPUT SELECTOR)
S202	1-571-826-11	SWITCH, ROTARY (INPUT SELECTOR)
S203	1-571-823-11	SWITCH, ROTARY SLIDE (REC OUT SELECTOR)
S204	1-571-828-11	SWITCH, PUSH (1 KEY) (SOURCE DIRECT)
S205	1-571-827-11	SWITCH, PUSH (1 KEY) (MUTING)
S206	1-571-822-11	SWITCH, ROTARY SLIDE (SPEAKER)
S207	1-571-825-11	SWITCH, ROTARY (MODE)
S401	1-571-111-11	SWITCH, PUSH (1 KEY) (CARTRIDGE)
S501	△ 1-554-920-31	SWITCH, PUSH (AC POWER) (1 KEY) (POWER)
S502	△ 1-570-307-11	(E)...SWITCH, VOLTAGE CHANGE (VOLTAGE SELECTOR)
T1	△ 1-449-685-11	(Canadian)...TRANSFORMER, POWER
T1	△ 1-449-687-11	(WG).....TRANSFORMER, POWER
T1	△ 1-449-688-11	(AEP).....TRANSFORMER, POWER
T1	△ 1-449-689-11	(UK).....TRANSFORMER, POWER
T1	△ 1-449-690-11	(E).....TRANSFORMER, POWER
TM501	1-537-235-11	TERMINAL BOARD (SP)
TP301	1-535-135-00	BASE POST 14MM (10MM PITCH) 2P
TP351	1-535-135-00	BASE POST 14MM (10MM PITCH) 2P
VH2	*1-564-321-00	PIN, CONNECTOR 2P
VH3	1-564-320-00	PIN, CONNECTOR 2P
VH4	*1-564-321-00	(AEP,UK,WG)....PIN, CONNECTOR 2P
VH5	*1-565-792-11	PIN, CONNECTOR 2P
VH6	*1-564-321-00	(AEP,UK,WG)....PIN, CONNECTOR 2P
VH8	*1-564-241-00	PIN, CONNECTOR 4P
VH9	*1-560-595-21	TERMINAL (WITH BASE)
VH11	1-564-321-00	(Canadian,E)...PIN, CONNECTOR 2P
VH12	1-564-320-00	PIN, CONNECTOR 2P
VH20	*1-535-141-00	(E)...BASE POST 22MM (10MM PITCH) 4P
ACCESSORY & PACKING MATERIAL		
3-786-976-11	(Canadian,UK,E)...MANUAL, INSTRUCTION	
3-786-976-41	(AEP,WG).....MANUAL, INSTRUCTION	
*4-929-219-01	CUSHION	
*4-929-263-11	INDIVIDUAL CARTON	

Note:
The components identified by mark △ or dotted line with mark △ are critical for safety. Replace only with part number specified.

Note:
Les composants identifiés par une marque △ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

TA-F222ESR/F530ES

SONY[®] SERVICE MANUAL

Canadian Model
AEP Model
UK Model
TA-F530ES
E Model
TA-F222ESR

SUPPLEMENT-1

File this Supplement with the Service Manual (9-953-786-11).

Subject : Boards change

Part number suffix of boards have been changed as shown below.

- | | |
|----------------------|--------------|
| • AC OUTLET BOARD | 1-629-755-15 |
| • EQ BOARD | 1-629-748-17 |
| • MAIN BOARD | 1-629-754-15 |
| • MUTING BOARD | 1-629-747-12 |
| • PIN JACK (S) BOARD | 1-629-756-14 |
| • SELECTOR BOARD | 1-629-746-14 |
| • SP JUMPER BOARD | 1-629-757-13 |
| • SP TERMINAL BOARD | 1-629-753-17 |

SECTION 3
DIAGRAMS

3-1. PRINTED WIRING BOARDS

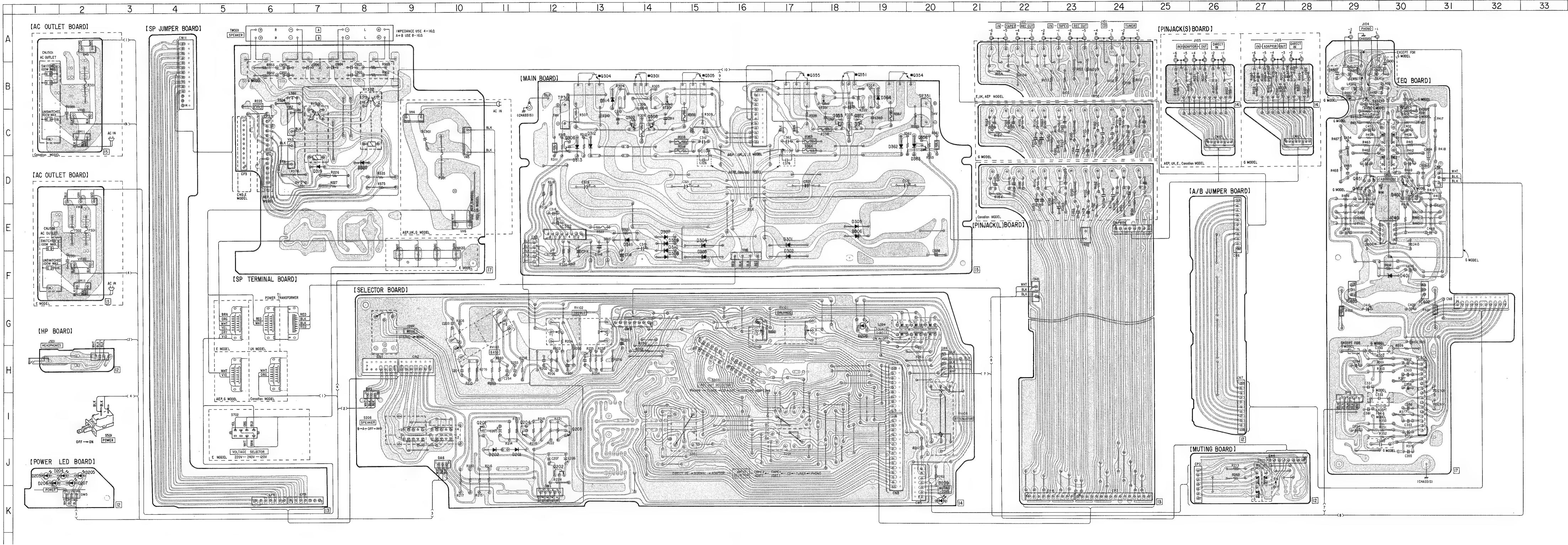
• Semiconductor Location

Ref. No.	Location	Ref. No.	Location
D201	J-11	IC301	I-30
D202	J-11	IC302	E-12
D203	J-1	IC401	E-30
D204	J-2	IC402	G-31
D205	J-2	IC403	G-29
D206	J-1		
D207	J-2	Q201	I-10
D208	G-19	Q202	J-12
D209	K-20	Q203	I-12
D301	E-17	Q204	I-11
D302	F-17	Q301	B-14
D303	F-15	Q302	C-14
D304	E-15	Q305	B-15
D305	E-18	Q306	C-12
D306	E-18	Q351	B-18
D307	E-14	Q352	C-18
D308	F-14	Q353	C-18
D309	E-14	Q354	B-19
D310	F-14	Q355	B-17
D311	E-14	Q356	C-20
D312	C-13	Q401	D-30
D313	C-12	Q402	D-30
D314	B-13	Q403	F-31
D319	D-7	Q404	F-21
D320	D-8	Q451	D-29
D362	C-19	Q452	D-29
D363	C-20		
D364	B-19		
D401	F-30		

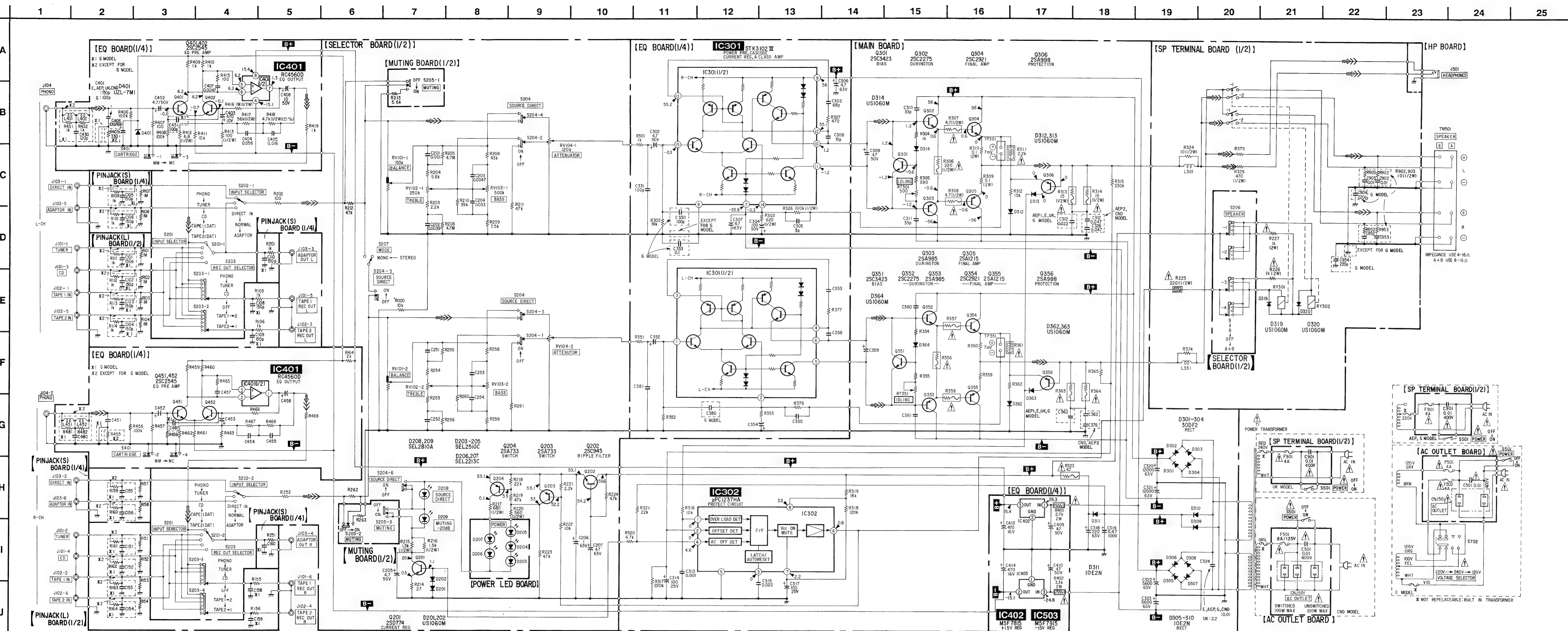
Note on Printed Wiring Boards:

- : parts extracted from the components side.
- : parts mounted on the conductor side.
- ⋯ : Pattern on the side which is seen.
- G : German model

Note :
There are two typed of AEP models which are depend on countries.
AEP2 model : Model for Scandinavian countries, Switzerland, Finland.
AEP1 model : Model for other European countries.



3-2. SCHEMATIC DIAGRAMS



Note Note on Schematic Diagrams:

- All capacitors are in μF unless otherwise noted. pF , μF , 50V or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and $1/4\text{W}$ or less unless otherwise specified.
- Components for right channel have same values as for left channel.
- \triangle : nonflammable resistor.
- \square : fusible resistor.

Note:

The components identified by mark \triangle or dotted line with mark \triangle are critical for safety. Replace only with part number specified.

Note:

Les composants identifiés par une marque \triangle sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

- B+**: B+ Line
- B-**: B- Line
- \square : adjustment for repair.
- Voltage and waveforms are dc with respect to ground under no-signal conditions.
- no mark: PHONO
- Voltagages are taken with a VOM. (Input impedance $10\text{M}\Omega$) Voltage variations may be noted due to normal production tolerances.
- Signal path.
- \Rightarrow : PHONO
- CND: Canadian model

Note:

There are two typed of AEP models which are depend on countries.
AEP2 model: Model for Scandinavian countries, Switzerland, Finland.
AEP1 model: Model for other European countries.

SECTION 5

ELECTRICAL PARTS LIST

NOTE:

The components identified by mark Δ or dotted line with mark Δ are critical for safety.
Replace only with part number specified.

Les composants identifiés par une marque Δ sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

When indicating parts by reference number, please include the board name.

- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

RESISTORS

All resistors are in ohms
METAL: Metal-film resistor
METAL OXIDE: Metal Oxide-film resistor
F: nonflammable

SEMICONDUCTORS

In each case, u: μ , for example:
uA...: μ A..., uPA...: μ PA..., uPB...: μ PB...,
uPC...: μ PC..., uPD...: μ PD...

CAPACITORS

μ F: μ F

COILS

μ H: μ H

- XX, -X mean standardized parts, so they may have some difference from the original one.

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.

- G: German model

Note:

There are two type of AEP models which are depend on countries.

AEP2 model: Model for Scandinavian countries.
Switzerland, Finland.

AEP1 model: Model for other European countries.

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
Δ 901	1-551-478-00	CORD, POWER (Canadian)		C158	1-162-284-31	CERAMIC 150PF 10% 50V (G)	
Δ 901	1-574-381-11	CORD, POWER (E)		C159	1-162-284-31	CERAMIC 150PF 10% 50V (G)	
Δ 901	1-574-804-11	CORD, POWER (UK)		C160	1-162-284-31	CERAMIC 150PF 10% 50V (G)	
Δ 901	1-574-805-11	CORD, POWER (AEP, G)		C201	1-130-471-00	MYLAR 0.001 μ F 5% 50V	
Δ 902	1-526-565-00	AC PLUG ADAPTOR (E)		C202	1-130-478-00	MYLAR 0.0039 μ F 5% 50V	
* 903	1-629-749-11	PC BOARD, HP		C203	1-130-479-00	MYLAR 0.0047 μ F 5% 50V	
* 904	1-629-751-11	PC BOARD, POWER LED		C204	1-136-159-00	FILM 0.033 μ F 5% 50V	
* 905	1-629-747-11	PC BOARD, MUTING		C205	1-123-369-00	ELECT 4.7 μ F 20% 50V	
* 906	1-629-755-11	PC BOARD, AC OUTLET (Canadian, E)		C206	1-124-791-11	ELECT 1.0 μ F 20% 100V	
* 907	1-629-753-11	PC BOARD, SP TERMINAL		C207	1-124-918-11	ELECT 47 μ F 20% 63V	
* 908	1-629-757-11	PC BOARD, SP JUMPER		C251	1-130-471-00	MYLAR 0.001 μ F 5% 50V	
* 909	1-630-146-11	PC BOARD, CLAMP (Canadian)		C252	1-130-478-00	MYLAR 0.0039 μ F 5% 50V	
* 910	A-4333-335-A	MOUNTED PCB, MAIN (AEP1, G, E)		C253	1-130-479-00	MYLAR 0.0047 μ F 5% 50V	
* 910	A-4333-343-A	MOUNTED PCB, MAIN (PC, Canadian, AEP2)		C254	1-136-159-00	FILM 0.033 μ F 5% 50V	
* 910	A-4333-725-A	MOUNTED PCB, MAIN (UK)		C302	1-123-369-00	ELECT 4.7 μ F 20% 50V	
* 911	1-629-750-11	PC BOARD, A/B JUMPER		C303	1-101-888-00	CERAMIC 68PF 5% 50V	
* 912	1-629-758-11	PC BOARD, PIN JACK (L)				(Canadian, E, AEP, G)	
* 913	1-629-756-11	PC BOARD, PIN JACK (S)		C303	1-104-276-11	POLYSTYRENE 68PF 10% 50V (UK)	
* 914	A-4333-336-A	MOUNTED PCB, EQ (G)		C304	1-124-572-11	ELECT 100 μ F 20% 63V	
* 914	A-4333-341-A	MOUNTED PCB, EQ (Canadian, AEP, E)				(Canadian, E, AEP, G)	
* 914	A-4333-726-A	MOUNTED PCB, EQ (UK)		C304	1-126-052-11	ELECT 100 μ F 20% 50V (UK)	
* 915	A-4410-898-A	MOUNTED PCB, SELECTOR		C305	1-102-936-00	CERAMIC 3.0PF +-0.25PF 50V	
		(Canadian, AEP1, G, UK, E)				(Canadian, E, AEP, G)	
* 915	A-4333-344-A	MOUNTED PCB, SELECTOR (AEP2)		C305	1-107-044-00	MICA 3PF 5% 500V (UK)	
916	1-533-190-11	CLIP, FUSE (Canadian)		C306	1-123-369-00	ELECT 4.7 μ F 20% 63V	
917	1-533-183-11	HOLDER, FUSE (AEP, G, UK, E)		C307	1-123-369-00	ELECT 4.7 μ F 20% 63V	
< CAPACITOR >				C308	1-102-951-00	CERAMIC 15PF 5% 50V	
C101	1-162-284-31	CERAMIC 150PF 10% 50V (G)				(Canadian, E, AEP, G)	
C102	1-162-284-31	CERAMIC 150PF 10% 50V (G)		C308	1-104-263-00	POLYSTYRENE 15PF 10% 125V (UK)	
C103	1-162-284-31	CERAMIC 150PF 10% 50V (G)		C309	1-124-910-11	ELECT 47 μ F 20% 50V (UK)	
C104	1-162-284-31	CERAMIC 150PF 10% 50V (G)		C309	1-124-918-11	ELECT 47 μ F 20% 63V	
C105	1-162-284-31	CERAMIC 150PF 10% 50V (G)				(Canadian, E, AEP, G)	
C106	1-162-284-31	CERAMIC 150PF 10% 50V (G)		C310	1-102-963-00	CERAMIC 33PF 5% 50V	
C108	1-162-284-31	CERAMIC 150PF 10% 50V (G)				(Canadian, E, AEP, G)	
C109	1-162-284-31	CERAMIC 150PF 10% 50V (G)		C310	1-107-159-00	MICA 33PF 5% 500V (UK)	
C110	1-162-284-31	CERAMIC 150PF 10% 50V (G)		C311	1-102-963-00	CERAMIC 33PF 5% 50V	
C151	1-162-284-31	CERAMIC 150PF 10% 50V (G)				(Canadian, E, AEP, G)	
C152	1-162-284-31	CERAMIC 150PF 10% 50V (G)		C311	1-107-159-00	MICA 33PF 5% 500V (UK)	
C153	1-162-284-31	CERAMIC 150PF 10% 50V (G)		C312	1-130-487-00	MYLAR 0.022 μ F 5% 50V	
C154	1-162-284-31	CERAMIC 150PF 10% 50V (G)				(E, AEP1, UK, G)	
C155	1-162-284-31	CERAMIC 150PF 10% 50V (G)		C312	1-136-161-00	FILM 0.047 μ F 5% 50V	
C156	1-162-284-31	CERAMIC 150PF 10% 50V (G)				(Canadian, AEP2)	
				C313	1-130-471-00	MYLAR 0.001 μ F 5% 50V	
				C314	1-124-122-11	ELECT 100 μ F 20% 50V	

Ref. No.	Part No.	Description	Remark			Ref. No.	Part No.	Description	Remark		
C315	1-130-487-00	MYLAR	0.022uF	5%	50V	C401	1-104-282-11	POLYSTYRENE	150PF	5%	50V (UK)
C317	1-124-122-11	ELECT	100uF	20%	50V	C402	1-123-369-00	ELECT	4.7uF	20%	50V
C318	1-123-604-00	ELECT	220uF	20%	63V	C403	1-124-472-11	ELECT	470uF	20%	10V
C319	1-123-379-00	ELECT	0.47uF	20%	100V						(Canadian, E, AEP)
C320	1-125-460-11	ELECT.	12000uF			C403	1-126-103-11	ELECT	470uF	20%	10V (UK, G)
C321	1-125-460-11	ELECT	12000uF			C404	1-130-341-00	FILM	0.056uF	3%	100V (UK)
C322	1-125-558-11	ELECT	5600uF			C404	1-136-162-00	FILM	0.056uF	5%	50V
C323	1-125-558-11	ELECT	5600uF								(Canadian, E, AEP, G)
C324	1-136-601-11	FILM	0.01uF	10%	630V	C405	1-130-971-00	FILM	0.016uF	3%	100V (UK)
					(Canadian, E, AEP, G)	C405	1-136-032-11	FILM	0.016uF	5%	50V
C324	1-136-880-11	FILM	2.2uF	10%	160V (UK)						(Canadian, E, AEP, G)
C326	1-136-161-00	FILM	0.047uF	5%	50V	C406	1-124-122-11	ELECT	100uF	20%	50V
					(Canadian, AEP2)	C407	1-130-479-00	MYLAR	0.0047uF	5%	50V
C330	1-162-282-31	CERAMIC	100PF	5%	50V (G)	C408	1-124-915-11	ELECT	10uF	20%	63V
C331	1-102-973-00	CERAMIC	100PF	5%	50V						(Canadian, E, AEP, G)
					(Canadian, E, AEP, G)	C408	1-126-059-11	ELECT	10uF	20%	50V (UK)
C331	1-136-808-11	FILM	100PF	5%	100V (UK)	C409	1-124-910-11	ELECT	47uF	20%	50V (UK)
C333	1-161-379-00	CERAMIC	0.01uF	30%	25V (G)	C409	1-124-918-11	ELECT	47uF	20%	63V
											(Canadian, E, AEP, G)
C352	1-123-369-00	ELECT	4.7uF	20%	50V	C410	1-124-910-11	ELECT	47uF	20%	50V (UK)
C353	1-101-888-00	CERAMIC	68PF	5%	50V	C410	1-124-918-11	ELECT	47uF	20%	63V
					(Canadian, E, AEP, G)						(Canadian, E, AEP, G)
C353	1-104-276-11	POLYSTYRENE	68PF	10%	50V (UK)	C413	1-126-103-11	ELECT	470uF	20%	16V
C354	1-124-572-11	ELECT	100uF	20%	63V						
					(Canadian, E, AEP, G)	C414	1-126-103-11	ELECT	470uF	20%	16V
C354	1-126-052-11	ELECT	100uF	20%	50V (UK)	C430	1-102-816-00	CERAMIC	120PF	5%	50V (G)
C355	1-102-936-00	CERAMIC	3.0PF	+-0.25PF	50V	C431	1-162-282-31	CERAMIC	100PF	5%	50V (G)
					(Canadian, E, AEP, G)	C451	1-101-361-00	CERAMIC	150PF	5%	50V
C355	1-107-044-00	MICA	3PF	0.5PF	500V (UK)						(Canadian, E, AEP)
C358	1-102-951-00	CERAMIC	15PF	5%	50V	C451	1-102-973-00	CERAMIC	100PF	5%	50V (G)
					(Canadian, E, AEP, G)	C451	1-104-282-11	POLYSTYRENE	150PF	5%	50V (UK)
C358	1-104-263-00	POLYSTYRENE	15PF	10%	125V (UK)	C452	1-123-369-00	ELECT	4.7uF	20%	50V
C359	1-124-910-11	ELECT	47uF	20%	50V (UK)	C453	1-124-472-11	ELECT	470uF	20%	10V
											(Canadian, E, AEP)
C359	1-124-918-11	ELECT	47uF	20%	63V	C453	1-126-103-11	ELECT	470uF	20%	10V (UK, G)
					(Canadian, E, AEP, G)	C454	1-130-341-00	FILM	0.056uF	3%	100V (UK)
C360	1-102-963-00	CERAMIC	33PF	5%	50V						
					(Canadian, E, AEP, G)	C454	1-136-162-00	FILM	0.056uF	5%	50V
C360	1-107-159-00	MICA	33PF	5%	500V (UK)						(Canadian, E, AEP, G)
C361	1-102-963-00	CERAMIC	33PF	5%	50V	C455	1-130-971-00	FILM	0.016uF	3%	100V (UK)
					(Canadian, E, AEP, G)	C455	1-136-032-11	FILM	0.016uF	5%	50V
C361	1-107-159-00	MICA	33PF	5%	500V (UK)						(Canadian, E, AEP, G)
C362	1-130-487-00	MYLAR	0.022uF	5%	50V	C457	1-130-479-00	MYLAR	0.0047uF	5%	50V
					(E, AEP1, UK, G)	C458	1-124-915-11	ELECT	10uF	20%	63V
C362	1-136-161-00	FILM	0.047uF	5%	50V						(Canadian, E, AEP, G)
					(Canadian, AEP2)	C458	1-126-059-11	ELECT	10uF	20%	50V (UK)
C376	1-136-161-00	FILM	0.047uF	5%	50V	C480	1-102-816-00	CERAMIC	120PF	5%	50V (G)
					(Canadian, AEP)	C481	1-162-282-31	CERAMIC	100PF	5%	50V (G)
C380	1-162-282-31	CERAMIC	100PF	5%	50V (G)	△C501	1-161-744-00	CERAMIC	0.01uF		400V
C381	1-102-973-00	CERAMIC	100PF	5%	50V						(Canadian, E)
					(Canadian, E, AEP, G)	△C901	1-161-744-00	CERAMIC	0.01uF		400V
C381	1-136-808-11	FILM	100pF	5%	100V (UK)						(AEP, UK, G)
C401	1-101-361-00	CERAMIC	150PF	5%	50V	C902	1-136-153-00	FILM	0.01uF	5%	50V (UK)
					(Canadian, E, AEP)	C903	1-136-153-00	FILM	0.01uF	5%	50V (UK)
C401	1-102-973-00	CERAMIC	100PF	5%	50V (G)						

The components identified by mark Δ or dotted line with mark Δ are critical for safety.
Replace only with part number specified.

Les composants identifiés par une marque Δ sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

Ref.No.	Part No.	Description	Remark	Ref.No.	Part No.	Description	Remark
C904	1-102-978-00	CERAMIC 220PF 5% 50V (G)		D311	8-719-200-77	DIODE 10E2N	
C952	1-136-153-00	FILM 0.01uF 5% 50V (UK)		D312	8-719-912-20	DIODE 1SS120	
C953	1-136-153-00	FILM 0.01uF 5% 50V (UK)		D313	8-719-912-20	DIODE 1SS120	
C954	1-102-978-00	CERAMIC 220PF 5% 50V (G)		D314	8-719-912-20	DIODE 1SS120	
< CONNECTOR >				D319	8-719-912-20	DIODE 1SS120	
* CN1	1-561-651-00	SOCKET, CONNECTOR 7P		D320	8-719-912-20	DIODE 1SS120	
* CN2	1-561-651-00	SOCKET, CONNECTOR 7P		D362	8-719-912-20	DIODE 1SS120	
* CN3	1-568-118-11	SOCKET, CONNECTOR 16P		D363	8-719-912-20	DIODE 1SS120	
* CN4	1-562-334-00	SOCKET, CONNECTOR 10P		D364	8-719-912-20	DIODE 1SS120	
* CN5	1-561-651-00	SOCKET, CONNECTOR 7P		D401	8-719-000-84	DIODE UZL-7M1	
CN6	1-568-203-11	PIN, CONNECTOR (PC BOARD) 11P		< CONNECTOR >			
CN7	1-568-203-11	PIN, CONNECTOR (PC BOARD) 11P		* EH2	1-564-508-11	PLUG, CONNECTOR 5P	
* CN8	1-563-381-11	SOCKET, CONNECTOR 11P		* EH3	1-564-508-11	PLUG, CONNECTOR 5P	
* CN9	1-566-451-11	HOUSING, CONNECTOR 3P		EH4	1-564-511-11	PLUG, CONNECTOR 8P	
* CN10	1-563-381-11	SOCKET, CONNECTOR 11P		< FUSE >			
CN11	1-568-117-11	SOCKET, CONNECTOR 14P		△F501	1-532-350-00	FUSE, TIME-LAG 4A (E)	
* CN12	1-565-484-11	CONNECTOR, BOARD TO BOARD 8P		△F501	1-532-510-00	FUSE, GLASE TUBE 8A (Canadian)	
△CNJ501	1-540-041-21	OUTLET, AC (AC OUTLET) (E)		△F502	1-532-350-00	FUSE, TIME-LAG 4A (E)	
△CNJ501	1-540-062-31	OUTLET, AC (AC OUTLET) (Canadian)		△F901	1-532-350-00	FUSE, TIME-LAG 4A (AEP, UK, G)	
* CNP604	1-508-694-00	SOCKET, CONNECTOR 8P		< IC >			
* CP1	1-560-532-00	PIN, CONNECTOR 7P (AEP, UK, G)		IC301	8-749-920-70	IC STK-3102-3	
* CP2	1-560-532-00	PIN, CONNECTOR 7P		IC302	8-759-111-68	IC uPC1237HA	
* CP3	1-560-532-00	PIN, CONNECTOR 7P (AEP, UK, G)		IC401	8-759-745-60	IC NJM4560D	
* CP3	1-568-204-11	PIN, CONNECTOR 16P		IC402	8-759-231-59	IC M5F7815L	
* CP3	1-569-648-11	PIN, CONNECTOR 11P (Canadian, E)		IC403	8-759-245-87	IC M5F7915L	
* CP4	1-568-202-11	PIN, CONNECTOR (PC BOARD) 10P		< JACK >			
CP5	1-568-120-11	PIN, CONNECTOR (PC BOARD) 7P		J101	1-580-028-11	JACK, PIN 6P (TUNER, CD, TAPE1 REC OUT)	
CP6	1-568-120-11	PIN, CONNECTOR (PC BOARD) 7P		J102	1-580-027-11	JACK, PIN 6P (TAPE1/TAPE2 IN, TAPE2 REC OUT)	
< DIODE >				J103	1-580-028-11	JACK, PIN 6P (DIRECT IN, ADAPTOR IN/OUT)	
D201	8-719-912-20	DIODE 1SS120		J104	1-568-250-11	JACK, PIN 2P (PHONO) (Canadian, E, AEP, G)	
D202	8-719-912-20	DIODE 1SS120		J104	1-568-250-21	JACK, PIN 2P (PHONO) (UK)	
D203	8-719-303-00	LED SEL2510C		J501	1-507-863-51	JACK, PHONE (HEADPHONES)	
D204	8-719-303-00	LED SEL2510C		< COIL >			
D205	8-719-303-00	LED SEL2510C		L301	1-420-872-00	COIL, AIR CORE	
D206	8-719-302-23	DIODE SEL2213C-C		L351	1-420-872-00	COIL, AIR CORE	
D207	8-719-302-23	DIODE SEL2213C-C		L401	1-413-101-00	COIL INPUT (G)	
D208	8-719-301-52	LED SEL2810A-C (SOURCE DIRECT)		L402	1-413-101-00	COIL INPUT (G)	
D209	8-719-301-52	LED SEL2810A-C (MUTING -20dB)		L451	1-413-101-00	COIL INPUT (G)	
D301	8-719-230-02	DIODE 30DF2		L452	1-413-101-00	COIL INPUT (G)	
D302	8-719-230-02	DIODE 30DF2		< TRANSISTOR >			
D303	8-719-230-02	DIODE 30DF2		Q201	8-729-140-96	TRANSISTOR KSC1008	
D304	8-719-230-02	DIODE 30DF2		Q202	8-729-194-57	TRANSISTOR 2SC945-P	
D305	8-719-200-77	DIODE 10E2N		Q203	8-729-141-03	TRANSISTOR 2SA733-QP	
D306	8-719-200-77	DIODE 10E2N					
D307	8-719-200-77	DIODE 10E2N					
D308	8-719-200-77	DIODE 10E2N					
D309	8-719-200-77	DIODE 10E2N					
D310	8-719-200-77	DIODE 10E2N					

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Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
Q204	8-729-141-03	TRANSISTOR	2SA733-QP	R203	1-247-717-11	CARBON	2.2K 5% 1/4W F
Q301	8-729-203-45	TRANSISTOR	2SC3423-0	R204	1-247-722-11	CARBON	5.6K 5% 1/4W
Q302	8-729-127-53	TRANSISTOR	2SC2275-P	R205	1-249-753-15	CARBON	4.7M 5% 1/4W
Q303	8-729-141-10	TRANSISTOR	2SA985A	R206	1-249-753-15	CARBON	4.7M 5% 1/4W
Q304	8-729-320-03	TRANSISTOR	2SC2921M-0	R208	1-247-170-00	CARBON	43K 5% 1/4W
Q305	8-729-320-01	TRANSISTOR	2SA1215M-0	R209	1-247-152-00	CARBON	7.5K 5% 1/4W
Q306	8-729-140-82	TRANSISTOR	2SA988-PAFAEA	R210	1-249-464-11	CARBON	39K 5% 1/4W
Q351	8-729-203-45	TRANSISTOR	2SC3423-0	R211	1-249-465-11	CARBON	47K 5% 1/4W
Q352	8-729-127-53	TRANSISTOR	2SC2275-P	R212	1-249-465-11	CARBON	47K 5% 1/4W
Q353	8-729-141-10	TRANSISTOR	2SA985A	R213	1-247-722-11	CARBON	5.6K 5% 1/4W
Q354	8-729-320-03	TRANSISTOR	2SC2921M-0	R214	1-247-693-11	CARBON	27 5% 1/4W
Q355	8-729-320-01	TRANSISTOR	2SA1215M-0	R215	1-247-754-11	CARBON	1.5K 5% 1/2W
Q356	8-729-140-82	TRANSISTOR	2SA988-PAFAEA	R216	1-247-754-11	CARBON	1.5K 5% 1/2W
Q401	8-729-354-52	TRANSISTOR	2SC2545	R217	1-247-750-11	CARBON	680 5% 1/2W
Q402	8-729-354-52	TRANSISTOR	2SC2545	R218	1-249-462-11	CARBON	22K 5% 1/4W
Q451	8-729-354-52	TRANSISTOR	2SC2545	R219	1-249-465-11	CARBON	47K 5% 1/4W
Q452	8-729-354-52	TRANSISTOR	2SC2545	R220	1-247-749-11	CARBON	560 5% 1/2W
< RESISTOR >				R221	1-247-717-11	CARBON	2.2K 5% 1/4W F
R000	1-247-725-11	CARBON	10K 5% 1/4W	R222	1-247-725-11	CARBON	10K 5% 1/4W
R101	1-246-545-00	CARBON	1.0M 5% 1/4W	R223	1-249-465-11	CARBON	47K 5% 1/4W
R102	1-246-545-00	CARBON	1.0M 5% 1/4W	R224	1-247-721-11	CARBON	4.7K 5% 1/4W
R103	1-246-545-00	CARBON	1.0M 5% 1/4W	△R225	1-247-743-11	CARBON	220 5% 1/2W F
R104	1-246-545-00	CARBON	1.0M 5% 1/4W	△R226	1-215-892-11	METAL OXIDE	1K 5% 2W F
R105	1-247-713-11	CARBON	1K 5% 1/4W F	△R227	1-215-892-11	METAL OXIDE	1K 5% 2W F
R106	1-249-417-11	CARBON	1K 5% 1/4W F	R251	1-249-417-11	CARBON	1K 5% 1/4W F
R107	1-246-545-00	CARBON	1.0M 5% 1/4W	R252	1-247-700-11	CARBON	100 5% 1/4W
R108	1-259-500-11	CARBON	1M 5% 1/6W	R253	1-247-717-11	CARBON	2.2K 5% 1/4W F
R109	1-249-417-11	CARBON	1K 5% 1/4W (G)	R254	1-247-722-11	CARBON	5.6K 5% 1/4W
R110	1-249-417-11	CARBON	1K 5% 1/4W (G)	R255	1-249-753-15	CARBON	4.7M 5% 1/4W
R111	1-249-417-11	CARBON	1K 5% 1/4W (G)	R256	1-249-753-15	CARBON	4.7M 5% 1/4W
R112	1-249-417-11	CARBON	1K 5% 1/4W (G)	R258	1-247-170-00	CARBON	43K 5% 1/4W
R113	1-249-417-11	CARBON	1K 5% 1/4W (G)	R259	1-247-152-00	CARBON	7.5K 5% 1/4W
R114	1-249-417-11	CARBON	1K 5% 1/4W (G)	R260	1-249-464-11	CARBON	39K 5% 1/4W
R151	1-246-545-00	CARBON	1.0M 5% 1/4W	R261	1-249-465-11	CARBON	47K 5% 1/4W
R152	1-246-545-00	CARBON	1.0M 5% 1/4W	R262	1-249-465-11	CARBON	47K 5% 1/4W
R153	1-246-545-00	CARBON	1.0M 5% 1/4W	R263	1-247-722-11	CARBON	5.6K 5% 1/4W
R154	1-246-545-00	CARBON	1.0M 5% 1/4W	R301	1-247-713-11	CARBON	1K 5% 1/4W F
R155	1-247-713-11	CARBON	1K 5% 1/4W F	R302	1-249-599-11	CARBON	91K 5% 1/4W
R156	1-249-417-11	CARBON	1K 5% 1/4W F	R303	1-249-668-11	CARBON	620 5% 1/2W
R157	1-246-545-00	CARBON	1.0M 5% 1/4W	R304	1-247-713-11	CARBON	1K 5% 1/4W F
R158	1-259-500-11	CARBON	1M 5% 1/6W	(E, AEP1, UK, G)			
R159	1-249-417-11	CARBON	1K 5% 1/4W (G)	R304	1-249-417-11	CARBON	1K 5% 1/4W
R160	1-249-417-11	CARBON	1K 5% 1/4W (G)	(Canadian, AEP2)			
R161	1-249-417-11	CARBON	1K 5% 1/4W (G)	R305	1-247-707-11	CARBON	390 5% 1/4W
R162	1-249-417-11	CARBON	1K 5% 1/4W (G)	(E, AEP1, UK, G)			
R163	1-249-417-11	CARBON	1K 5% 1/4W (G)	R305	1-249-412-11	CARBON	390 5% 1/4W
R164	1-249-417-11	CARBON	1K 5% 1/4W (G)	(Canadian, AEP2)			
R201	1-249-417-11	CARBON	1K 5% 1/4W F	△R306	1-212-990-00	FUSIBLE	220 5% 1/2W F
R202	1-247-700-11	CARBON	100 5% 1/4W	△R307	1-212-950-00	FUSIBLE	4.7 5% 1/2W F
				△R308	1-212-950-00	FUSIBLE	4.7 5% 1/2W F
				R309	1-217-611-00	RES, METAL PLATE	0.1

The components identified by mark △ or dotted line with mark △ are critical for safety.
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Les composants identifiés par une marque △ sont critiques pour la sécurité.
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Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
R310	1-217-611-00	RES, METAL PLATE 0.1		R411	1-247-725-11	CARBON 10K 5% 1/4W	
△R311	1-247-717-11	CARBON 2.2K 5% 1/4W	F	R412	1-249-484-11	CARBON 6.8 5% 1/2W	
R312	1-249-460-11	CARBON 15K 5% 1/4W		R413	1-247-739-11	CARBON 100 5% 1/2W	
△R313	1-212-962-00	FUSIBLE 15 5% 1/2W	F	R414	1-247-138-00	CARBON 2K 5% 1/4W	
△R314	1-212-962-00	FUSIBLE 15 5% 1/2W	F	R415	1-247-700-11	CARBON 100 5% 1/4W	
R315	1-247-891-00	CARBON 330K 5% 1/4W		R416	1-214-937-00	METAL 1M 1% 1/2W	
R316	1-247-725-11	CARBON 10K 5% 1/4W		R417	1-249-844-11	CARBON 56K 5% 1/2W	
R317	1-247-887-00	CARBON 220K 5% 1/4W		R418	1-249-818-11	CARBON 4.7K 1% 1/2W	
R318	1-247-881-00	CARBON 120K 5% 1/4W		R419	1-247-713-11	CARBON 1K 5% 1/4W	F (Canadian, E, AEP, UK)
R319	1-249-461-11	CARBON 18K 5% 1/4W		R431	1-247-713-11	CARBON 1K 5% 1/4W	(G)
R320	1-247-721-11	CARBON 4.7K 5% 1/4W		R432	1-247-713-11	CARBON 1K 5% 1/4W	(G)
R321	1-249-462-11	CARBON 22K 5% 1/4W		R455	1-247-706-11	CARBON 330 5% 1/4W	F (Canadian, E, AEP, UK)
△R323	1-212-849-00	FUSIBLE 4.7 5% 1/4W	F	R456	1-249-469-11	CARBON 100K 5% 1/4W	
R324	1-247-727-11	CARBON 10 5% 1/2W		R457	1-247-700-11	CARBON 100 5% 1/4W	
R325	1-247-747-11	CARBON 470 5% 1/2W		R458	1-249-469-11	CARBON 100K 5% 1/4W	
R326	1-249-721-11	CARBON 100K 5% 1/2W		R459	1-247-713-11	CARBON 1K 5% 1/4W	F
R327	1-247-708-11	CARBON 470 5% 1/4W		R460	1-247-713-11	CARBON 1K 5% 1/4W	F
R351	1-247-713-11	CARBON 1K 5% 1/4W	F	R461	1-247-725-11	CARBON 10K 5% 1/4W	
R352	1-249-599-11	CARBON 91K 5% 1/4W		R462	1-249-484-11	CARBON 6.8 5% 1/2W	
R353	1-249-668-11	CARBON 620 5% 1/2W		R463	1-247-739-11	CARBON 100 5% 1/2W	
R354	1-247-713-11	CARBON 1K 5% 1/4W	F (E, AEP1, UK, G)	R465	1-247-700-11	CARBON 100 5% 1/4W	
R354	1-249-417-11	CARBON 1K 5% 1/4W	(Canadian, AEP2)	R466	1-214-937-00	METAL 1M 1% 1/2W	
R355	1-247-707-11	CARBON 390 5% 1/4W	(E, AEP1, UK, G)	R467	1-249-844-11	CARBON 56K 5% 1/2W	
R355	1-249-412-11	CARBON 390 5% 1/4W	(Canadian, AEP2)	R468	1-249-818-11	CARBON 4.7K 1% 1/2W	
△R356	1-212-990-00	FUSIBLE 220 5% 1/2W	F	R469	1-247-713-11	CARBON 1K 5% 1/4W	F
△R357	1-212-950-00	FUSIBLE 4.7 5% 1/2W	F	R481	1-247-713-11	CARBON 1K 5% 1/4W	(G)
△R358	1-212-950-00	FUSIBLE 4.7 5% 1/2W	F	R482	1-247-713-11	CARBON 1K 5% 1/4W	(G)
R359	1-217-611-00	RES, METAL PLATE 0.1		R902	1-247-727-11	CARBON 10 5% 1/2W	(G)
R360	1-217-611-00	RES, METAL PLATE 0.1		R903	1-247-727-11	CARBON 10 5% 1/2W	(G)
△R361	1-247-717-11	CARBON 2.2K 5% 1/4W	F	R952	1-247-727-11	CARBON 10 5% 1/2W	(G)
R362	1-249-460-11	CARBON 15K 5% 1/4W		R953	1-247-727-11	CARBON 10 5% 1/2W	(G)
△R363	1-212-962-00	FUSIBLE 15 5% 1/2W	F	< VARIABLE RESISTOR >			
△R364	1-212-962-00	FUSIBLE 15 5% 1/2W	F	RT301	1-237-455-11	RES, ADJ, CARBON 500	
R365	1-247-891-00	CARBON 330K 5% 1/4W		RT351	1-237-455-11	RES, ADJ, CARBON 500	
R374	1-247-727-11	CARBON 10 5% 1/2W		RV101	1-238-448-11	RES, VAR, CARBON 150K/150K (BALANCE)	
R375	1-247-747-11	CARBON 470 5% 1/2W		RV102	1-238-446-11	RES, VAR, CARBON 250K/250K (TREBLE)	
R376	1-249-721-11	CARBON 100K 5% 1/2W		RV103	1-238-447-11	RES, VAR, CARBON 25K/500K (BASS)	
R377	1-247-708-11	CARBON 470 5% 1/4W		RV104	1-237-472-11	RES, VAR, CARBON 120K/120K (ATTENUATOR)	
△R401	1-216-459-00	METAL OXIDE 2.7K 5% 2W	F	< RELAY >			
△R402	1-215-895-11	METAL OXIDE 3.3K 5% 2W	F	RY301	1-515-676-11	RELAY	
R405	1-247-706-11	CARBON 330 5% 1/4W	F (Canadian, E, AEP, UK)	RY302	1-515-676-11	RELAY	
R406	1-249-469-11	CARBON 100K 5% 1/4W		< SWITCH >			
R407	1-247-700-11	CARBON 100 5% 1/4W		S201	1-571-824-11	SWITCH, ROTARY (INPUT SELECTOR)	
R408	1-249-469-11	CARBON 100K 5% 1/4W		S202	1-571-826-11	SWITCH, ROTARY (INPUT SELECTOR)	
R409	1-247-713-11	CARBON 1K 5% 1/4W	F	S203	1-571-823-11	SWITCH, ROTARY SLIDE (REC OUT SELECTOR)	
R410	1-247-713-11	CARBON 1K 5% 1/4W	F				

The components identified by mark △ or dotted line with mark △ are critical for safety. Replace only with part number specified.

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Ref.No.	Part No.	Description	Remark
S204	1-571-828-11	SWITCH, PUSH (1 KEY) (SOURCE DIRECT)	
S205	1-571-827-11	SWITCH, PUSH (1 KEY) (MUTING)	
S206	1-571-822-11	SWITCH, ROTARY SLIDE (SPEAKER)	
S207	1-571-825-11	SWITCH, ROTARY (MODE)	
S401	1-571-111-11	SWITCH, PUSH (1 KEY) (CARTRIDGE)	
△S501	1-554-920-11	SWITCH, PUSH (AC POWER) (1 KEY) (POWER)	
△S702	1-570-307-11	SWITCH, VOLTAGE CHANGE (VOLTAGE SELECTOR)	(E)
< TRANSFORMER >			
△T1	1-449-685-11	TRANSFORMER, POWER (Canadian)	
△T1	1-449-687-11	TRANSFORMER, POWER (G)	
△T1	1-449-688-11	TRANSFORMER, POWER (AEP)	
△T1	1-449-689-11	TRANSFORMER, POWER (UK)	
△T1	1-449-690-11	TRANSFORMER, POWER (E)	
< TERMINAL >			
TM501	1-537-227-11	TERMINAL BOARD (SP) (SPEAKER) (AEP2)	
TM501	1-537-228-11	TERMINAL BOARD (SP) (SPEAKER) (G)	
TM501	1-537-235-11	TERMINAL BOARD (SP) (SPEAKER)	(Canadian, E, AEP1, UK)
< TEST PIN >			
* TP301	1-535-135-00	BASE POST 14MM (10MM PITCH) 2P	
* TP351	1-535-135-00	BASE POST 14MM (10MM PITCH) 2P	
< CONNECTOR >			
* VH2	1-535-139-00	BASE POST 14MM (10MM PITCH) 2P	
* VH3	1-535-139-00	BASE POST 14MM (10MM PITCH) 2P	
* VH4	1-564-321-00	PIN, CONNECTOR 2P (AEP, UK, G)	
* VH5	1-565-792-11	PIN, CONNECTOR 2P	
* VH6	1-564-321-00	PIN, CONNECTOR 2P (AEP, UK, G)	
* VH8	1-564-241-00	PIN, CONNECTOR 4P	
* VH9	1-560-595-21	TERMINAL (WITH BASS) (E)	
* VH9	1-564-321-00	PIN, CONNECTOR 2P (Canadian)	
* VH10	1-565-792-11	PIN, CONNECTOR 2P (Canadian, E)	
* VH11	1-564-321-00	PIN, CONNECTOR 2P (Canadian, E)	
* VH12	1-564-320-00	PIN, CONNECTOR 2P	
* VH15	1-565-792-11	PIN, CONNECTOR 2P	
* VH20	1-535-141-00	BASE POST 22MM (10MM PITCH) 4P (E)	

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